

THE
Horseowners' Companion

OR
Hints on the Selection, Purchase, and General Management of the Horse.



How to avoid Disease and Save Money.

WITH MANY USEFUL HINTS AND CAUTIONS TO BE
NOTED AND REMEMBERED BY PURCHASERS.

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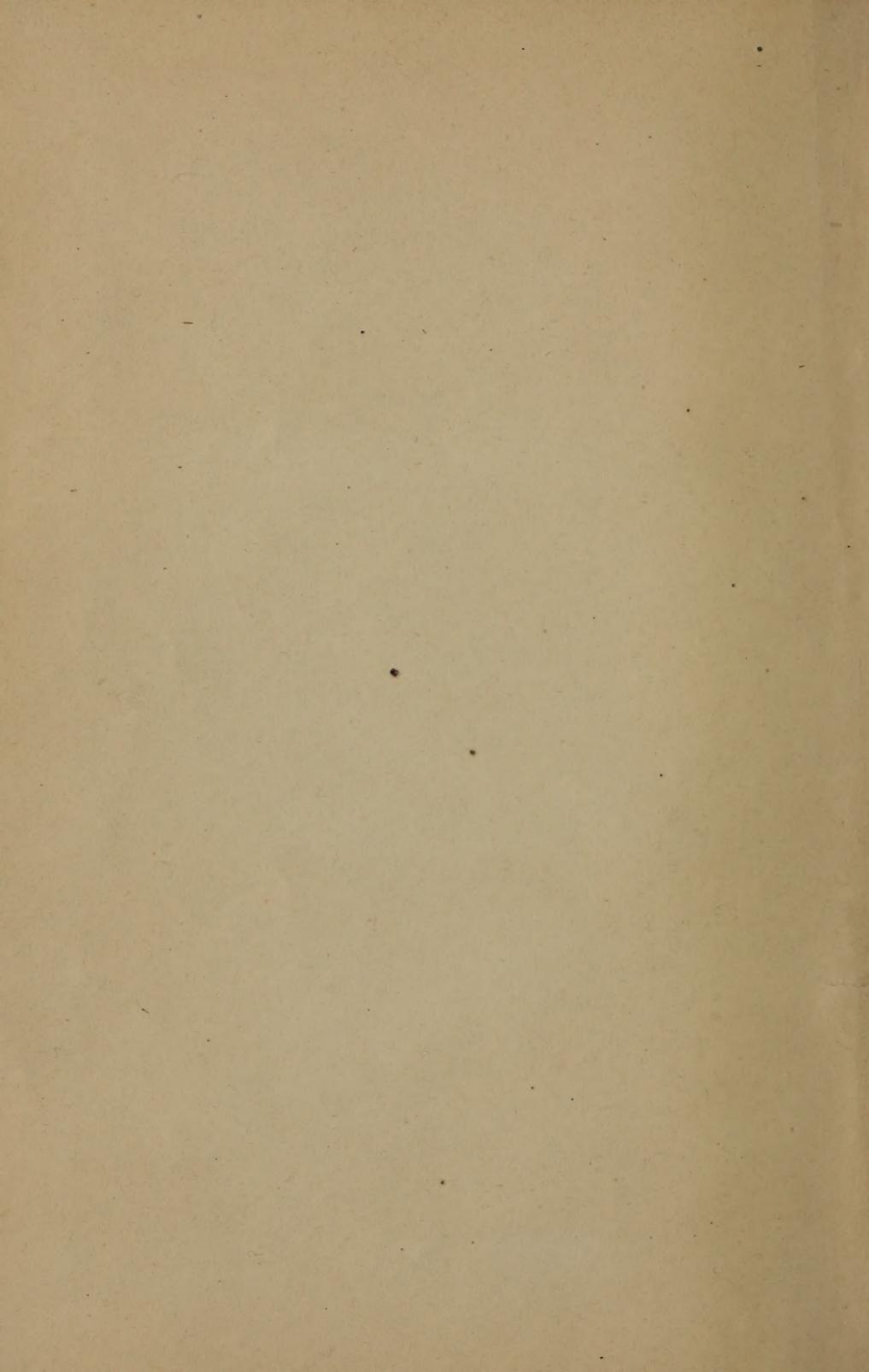
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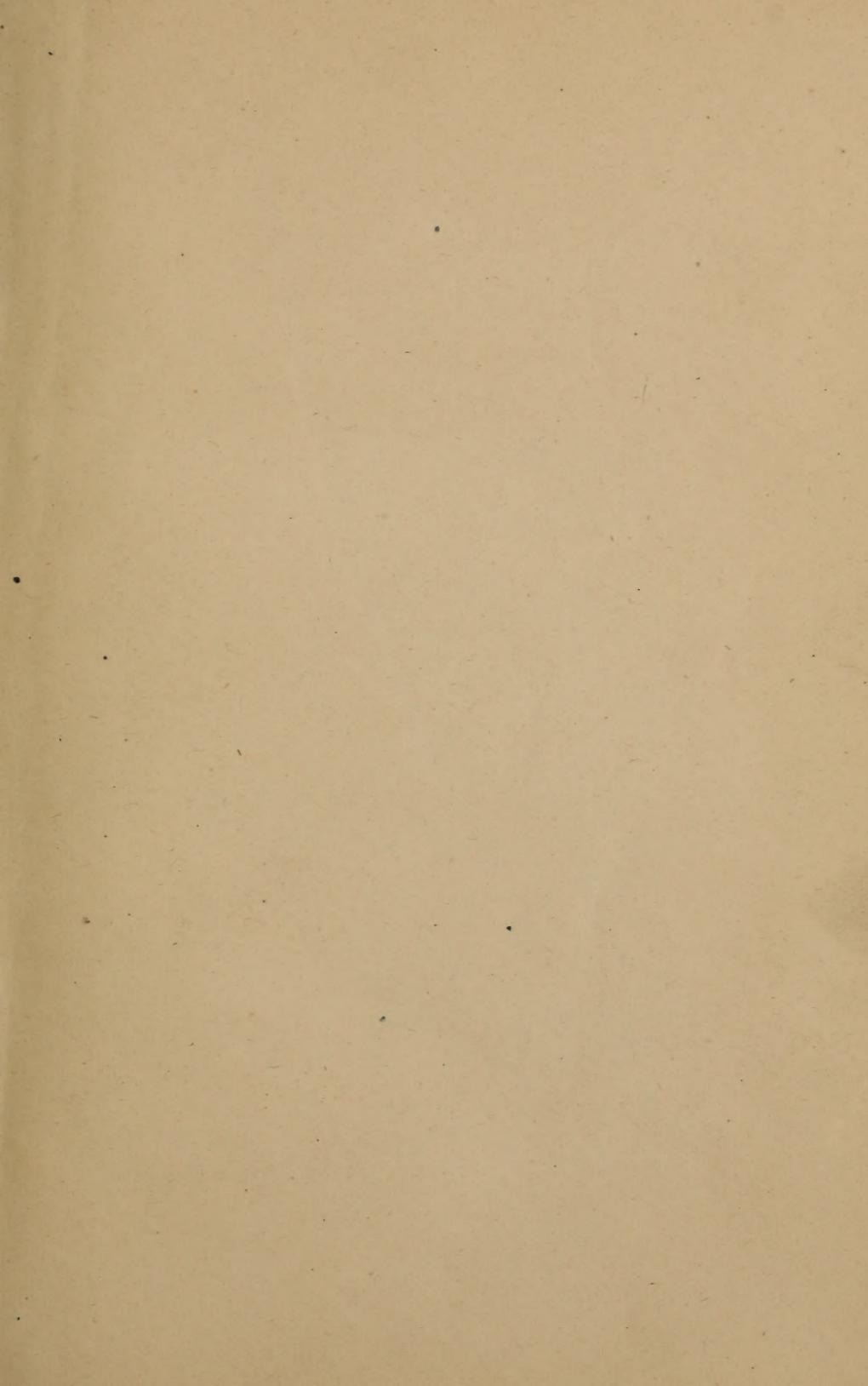
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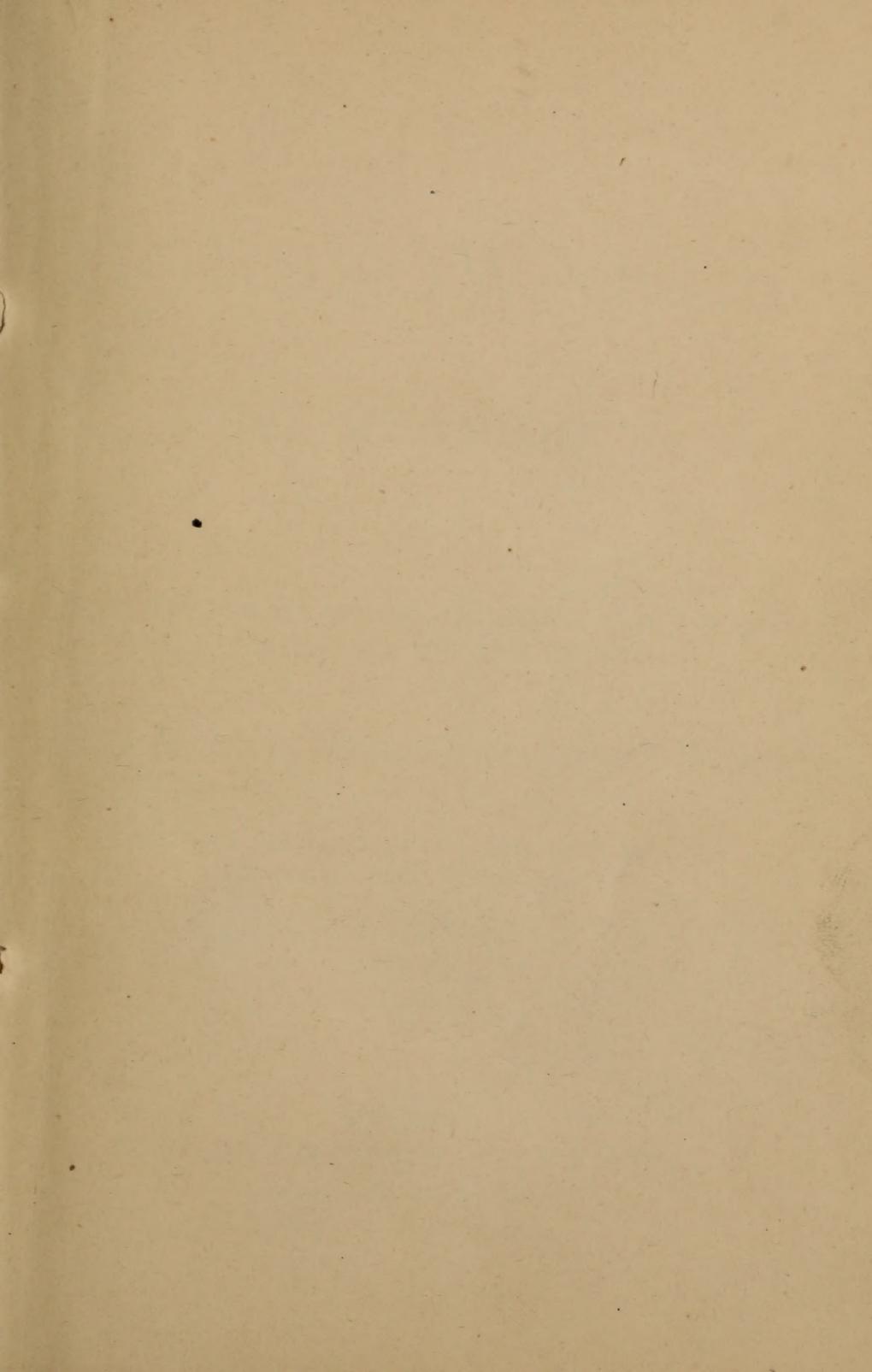
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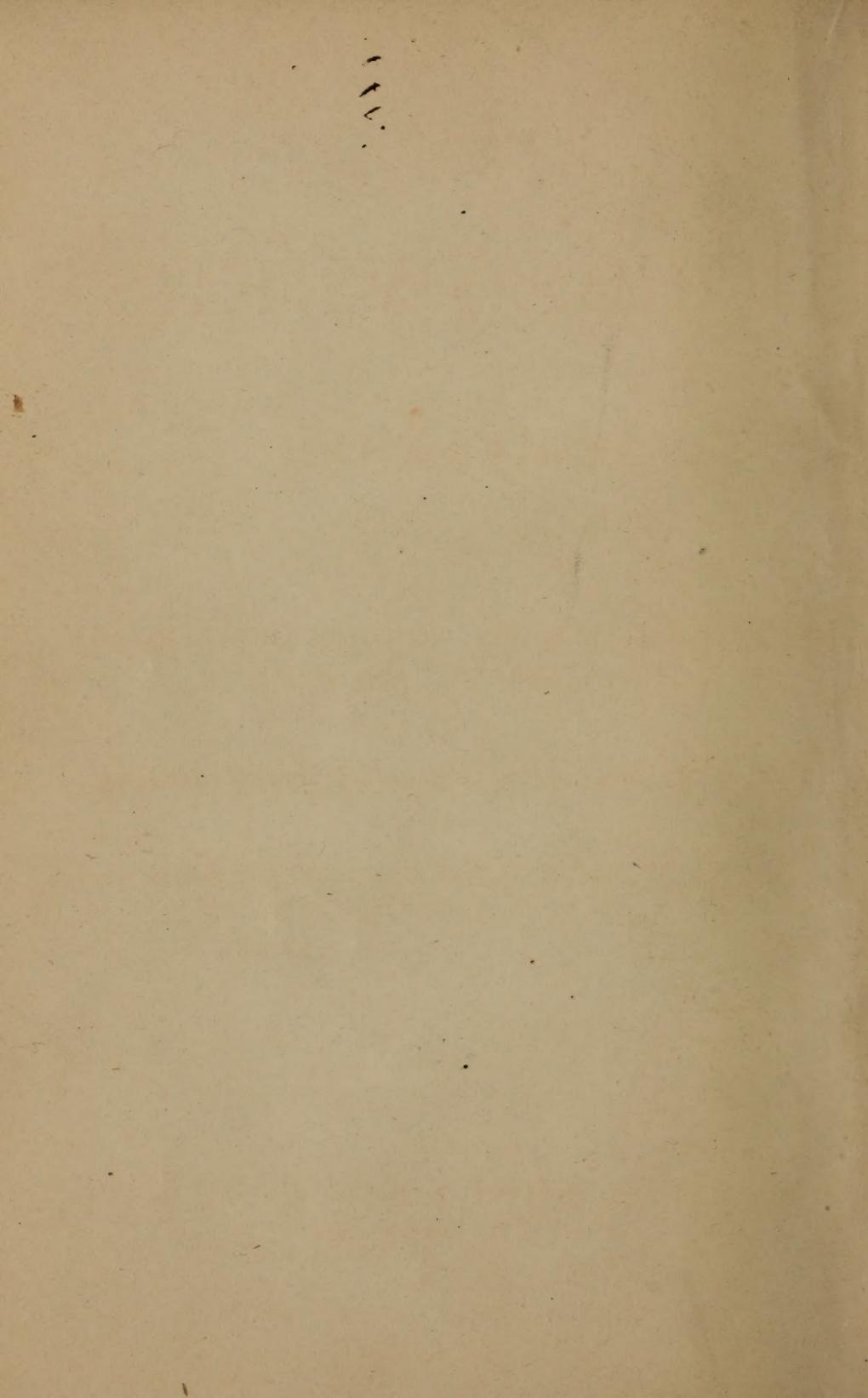
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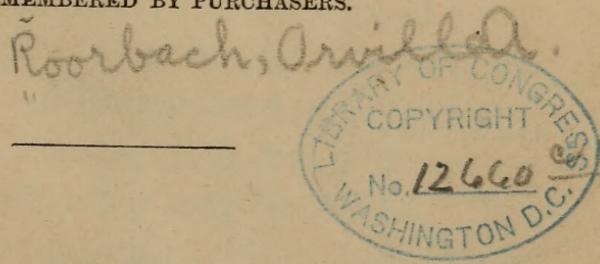
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INTRODUCTION.

In presenting this little treatise to the owners of horses, I am but carrying out the wishes of many excellent friends obtained throughout my professional career. To them I cannot sufficiently express the obligations which are felt for the willingness with which I have been allowed to test the accuracy of my statements in regard to feeding, as a means of preventing disease.

The contents of the following pages are the results of long practical experience ; and have been written with a view to the benefit of persons not thoroughly practised in the proper management of horses, and to whom the knowledge now imparted may be useful. To men of business in particular, whose time is too much occupied to admit of leisure for much study, beyond their every-day pursuits, the present work may afford information not so easily acquired in other forms. A few minutes de-

voted to the perusal of it will probably amply compensate them for their trouble, as the whole is comprised in a small compass. It will be found that the entire treatment of the horse—that is, the useful, or road horse—is fully considered in the subsequent pages. The publishers, also, are not ashamed to confess, that one part of their object has been to induce greater humanity than is usually practised in the treatment of so noble an animal. But those who are not susceptible of the finer feelings of our nature, may be influenced by consideration of self-interest ; and it would not only evince humanity, but it would be a pecuniary gain if the owners of horses paid more attention than they usually do to that kindness of treatment which is dictated by Nature herself.

In all ages, and in all nations the horse has been esteemed as one of the noblest and most valuable animals of the brute creation. It is unnecessary, for the object of the present work to make any particular allusion to the pride and admiration in which he was held in ancient Greece and Rome, and indeed

among every warlike people. Caligula, it is recorded, invested his horse with the dignity of a Consul.

The Arabs are perhaps the best judges of horses, as well as the most considerate masters of them, in the world. They set the highest estimation upon mares, and are thoroughly convinced that the value of the foal depends not so much on the sire as on the dam ; for which reason they refuse very large prices for mares of high-blood. It may also be observed that they trace the pedigree of a horse not through the sire, but through the dam.

The value of horses mainly depends upon their soundness and capability for work. It is, therefore, of the utmost importance to keep them in the most healthy condition. Yet, this being universally allowed, it is a constant and general complaint that so few of these valuable animals are preserved in a proper state. But it is surprising that those who so complain do not perceive that the blame principally rests with themselves, as the remedy lies solely in their own hands, so far, at least, as any

remedy can be applied. There can be no doubt that persons who employ horses wish to get all the work they can from them, without decreasing their value ; but that they do not effect this desirable object is evident from the prevalence of the complaints made upon the subject. The general employers of horses, more particularly men of business and commercial men, seem to think that a knowledge of the horse is implanted within them by nature ; and this overweening confidence leads them into an infinity of errors, and prevents them reading what better-informed persons have said upon so important a topic. Nor do such persons take even common precautions in the treatment of these animals, by attending to experience or example ; but they trust the care and health of their horses to ostlers and others who have but a secondary interest in preserving them in good condition.

Here, then, the reader may perhaps ask, What am I to do ? I take every possible care of my horse ; he has abundant food ; yet he is not what I could wish him.

To correct erroneous opinions on this inter-

esting question, to qualify horses to work with ease to themselves, and also to contribute to the pleasure of their owners, constitute the intent and object of this little volume.

That horses ought to remain sound, and would do so, to a much later period of life than is the fact at present, will, it is hoped, be demonstrated.

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THE
HORSEOWNERS' COMPANION.

CHAPTER I.

Management.

SOME men seem to think their horses mere machines ; and they seldom study how to make the most of them. Brush off the dirt which offends the eye, or spoils the clothes, and give the animal a regular portion of food. Wheels must be greased, or the naves would burn, and the progress of the carriage stopped. So with horses ; they must be fed by the same rule as you grease carriage wheels, or they would in like manner be brought to a termination of their career. Why, then, so much apathy towards those four-footed servants who contribute largely to the pleasure of the rich, and are the means by which multitudes are in the habit of procuring their daily bread.

In order to care for a horse properly, it is not necessary

that a man be thoroughly conversant with every part of the subject. By simple attention to the rules laid down in this volume, he may turn his horse to much better account, save himself much expense in the course of the year, get the animal to do his work in a better manner, and with the pleasing reflection that he has also prevented the infliction of needless suffering. In fact, the reader will find, that he would seldom have a bad horse, if it were not for gross mismanagement. Ignorance is the sole cause of the nondiscovery of the good qualities of the animal.

In the first place, we may lay it down as an axiom that in all cases the best and wisest policy is to treat a horse with kindness and gentleness, and the same is true with regard to all animals given to us for our use, but the horse, in particular, should be an object of our especial regard. How many of the complaints under which he labors are the consequences of man's brutality! His diseases are few, even in an artificial state, and those few are brought on by ill-treatment, or, in milder language, mismanagement. Yet there may be quite as much cruelty in the one case as the other, if the latter be not of the two the worst.

What horses, for instance have to undergo such unremitting fatigue as those drawing loads? And yet, they are as a class treated with a lack of consideration which reflects little credit upon the humanity of the owners; who from ignorance or carelessness, fail to acquire a competent knowledge of the best mode of treating them? They know that horses have mouths to be fed, for this knowledge is forced upon them by the cost of their keep, and they know also that the mouth is useful as a place for the bit, without

which they could not be ridden or driven, and this, generally speaking, is the full extent of the knowledge possessed by the class of persons alluded to of horses. To understand the quantities of solids or fluids they require for the preservation of health is scarcely to be expected of them ; some persons have a fanciful theory in favor of giving them drugs, both in their meat and water, in most of which cases, if the animals could speak, they would say, "Throw physic to the dogs ;" others think that soapy, or dirty, filthy water, is better than the clearest, as they will drink more sparingly of it ; but horses are not likely, any more than human beings, to grow healthy upon poison, or to fatten upon filth.

Never take the word of an ostler where the health of your horse is concerned, or that of the ostler's farrier, or veterinary surgeon ; for, without attempting to disparage respectable men in either of those departments, it is notorious that there are many unworthy members of both, who do not scruple to participate in the dishonest gains of the rascally ostler. In case of necessity, always apply to some creditable person in the neighborhood to recommend you to a professional man of character ; but as prevention is better than cure, it is our intention in the sequel to point out the best means of avoiding the accidents and maladies to which horses in common use are liable.

Mismanagement in any department is universally acknowledged to be the precursor of evil consequences, and one of the golden rules in our social economy is that which teaches how to recognise the one and avert the other.

As things at present exist in the many places to which these remarks apply, one would be inclined to the opinion

that the study of *system* in the stable and cow-shed is unworthy the time, trouble, attention, or altogether useless: hence the result; valuable animals are left to the care of illiterate attendants, who prescribe for their wants and comforts under predominate ignorance. At one time they are fed with extravagance, and at another a nutritous meal is denied them.

Veterinary surgeons in some districts can testify to the bulk of their cases being those which arise from indigestion, and the insurance papers of many a defunct society would afford doleful tales of sudden death from the same states, causing rupture of the stomach, intestines, or diaphragm, calculi (or stones), and incurable diabetes running into farcy and glanders.

In ignorance of the nature of food, principles of feeding and management, the annual losses from indigestion and its consequences among horses and cattle are somewhat startling, and unfortunately too common.

Notwithstanding this, all busy themselves in searching for a *cure*, without going further to attempt a solution of the mystery, which may be interpreted by the principle of *prevention*. We thus go on in blindness and obstinacy, seeking after some brilliant theory, and in eager pursuit of that which is remote, neglect the highly profitable and easily deciphered lessons which, already pregnant with most ample information, are completely within the grasp.

CHAPTER II.

Kinds of Horses.

ITH these preliminary observations, we remark that horses may be described, generally under the following denominations :

The Road Horse.

The Farmer's Horse.

The Coach Horse.

The Heavy Draught Horse.

The Dray Horse.

The Race Horse.

The Pony.

The road horse is the one to which the following pages have been chiefly dedicated ; we will therefore pass on to

THE FARMER'S HORSE.

The farmer's horse is one that has to undergo all sorts of drudgery, both for business and pleasure ; ridden or driven to market, or church, or on a visit to some rather distant neighbor, or sometimes lent to a friend to go anywhere. For this kind of horse, the best standard is reckoned about fifteen hands and two inches ; that is, higher than the road

horse. An animal, with a shoulder thicker, lower, and not so slanting, as that in the roadster, is preferable for the collar ; and collar-work is that for which the farmer's horse is chiefly destined. Horses for this purpose should be stout and compactly built, without being particularly heavy ; and if they are half-bred, meaning that they have some blood in their veins, so much the better. The farmer's horse requires both weight to push forward, and activity to get over the ground.

Formerly there was a prepossession among farmers in favor of huge, bulky horses, but that has declined, and given way in a considerable measure, to more rational notions. What the farmer really requires is a horse of moderate size, but strong and active ; not one large in make and slow in progress.

It cannot, however, be expected that horses used at the plough, or in draught, will be found the most agreeable saddle, or pleasure, horses ; but what does a small farmer want with a dashing steed ? If his horse will carry him to market or to church, and perform his week-day's work he ought to be satisfied.

A farmer, not in an extensive way, should always prefer a mare to a gelding. There is more work to be obtained in the end, with the former than the latter ; besides there is advantage to be derived from her breeding ; and she may be rendered useful while breeding, if worked moderately.

THE COACH-HORSE.

The coach-horse has improved with the refinement of the times. He is not now the same vulgar animal he was wont

to be in bygone days. He has cast off his old-fashione'd stiff-looking coat, and mounted one of modern gentility. Formerly he was one of the most clumsy, unmannerly, ill-begotten, mishapen, animals in the world ; and just as well qualified to be harnessed to a dray as to a carriage.

The principle points of the coach-horse are those which qualify him for hard work and endurance ; a deep and well proportioned body, bone under the knee ; substance in its right place, and sound, open, tough feet.

THE HEAVY DRAUGHT-HORSE.

Horses of this denomination should stand from fifteen to sixteen hands high ; should be large-headed ; low-shouldered ; and thick on the top ; deep and round-chested ; long-backed ; high in the croup ; large and strong in the quarters ; full in the flanks, round in the legs, and short in the pasterns.

THE DRAY-HORSE.

This kind of horse should have a broad breast, with thick and upright shoulders ; a low forehand, deep and round barrel ; loins broad and high ; ample quarters ; thick forearms and thighs ; short legs, round hoofs, broad at the heels, and not too flat in the soles. They always know what they are about, are corrected easily, and are perfectly docile.

The dray horses in the metropolis, and all large towns are of inestimable importance. The cart-horse hast his peculiarity ; he knows the extent of his powers, and failing to accomplish the task imposed upon him, no exercise of the whip, or any other method of spurring him on, will succeed in making him exert his strength, and strain his muscles, in vain.

THE RACE HORSE.

It has been stated, upon good authority, that the race-horse is not an aboriginal of Europe, but that it derives its breed from the warmer climes of Asia. The English race-horse in blood is nearly allied to the true Arabian courser, but is much larger, and is not to be surpassed by any coursers in the world. Take a thorough-bred English racer, and whether he is placed on the burning plains of India or in the frigid regions of the north, it will be found that he has a spirit, a speed, and a courage, unequalled by any other quadruped of the same species in the world. It is related, that an ordinary racer has been known to go at the rate of a mile in less than two minutes ; but there have been instances of horses running nearly a mile in *one* minute.

The form of the head of the English racer resembles that of the Arabian. The neck is beautifully arched (one of the greatest beauties in the horse;) his shoulders are oblique and lengthened ; his hind legs are well proportioned ; his quarters ample and muscular ; his whole legs, from the knee downwards, sufficiently graduated,

“Small by degrees and beautifully less.”

He must be well bred. The chief points to be regarded in his make are that he should have plenty of haunch ; be well ribbed, or tight and trim built ; of a full chest with good hams, and a nose that will go into a quart pot. He is the field marshal of his kind, and in the extent of his spirit and courage, may well be considered the paragon among animals.

Thorough-bred is a term employed to indicate the descent of a horse from the Eastern, or Arabian courser; but there can be no doubt that the English racer has been much improved by the commixture of his blood with that of Asia. The horses of the first blood, remarks a good judge, or such as are the nearest possible to the Eastern stock, are,—those immediately produced from an Arabian or Barbary stallion with an English mare, which has been already crossed with a Barb or Arabian steed in the first degree.

THE PONY.

Ponies are horses in miniature and therefore the treatment of animals of mature growth, is applicable to those of smaller size. The less may be consequently said upon this branch of the subject.

The *sheltie* is the most diminutive of the breed, and seems totally distinct from all others. In height it varies from seven and a half hands, and is probably one of the earliest breeds introduced into Great Britain.

CHAPTER III.

The Selection and Purchase of Horses.

HE arduous nature of the various conditions which attend the selection and purchase of horses, is generally understood and acknowledged even by those of little

experience. There is no subject upon which buyers so often feel the greatest need of assistance and advice, and, at the same time, where greater difficulty exists in rendering these profitable and acceptable. Circumstances may arise, phases previously hidden may appear, or gratuitous interference disturb the aspect of affairs, and thus begin all the troubles and vexations which too commonly supplement the efforts of those in search of a horse.

The *tricks of low and disreputable dealers* render the process at once tedious, harassing, and difficult ; while the subsequent ordeal may be fairly represented as being irremediable as well as inevitable. Purchasers at fairs are greatly exposed to the practices of such rascals, who never fail to secure both animal and money in the end, and thus provide the means of constantly possessing a trap wherein unsuspecting persons easily fall.

Some years ago a hard-working honest man, well known to the writer, attended a fair for the purchase of a cart-horse. He was by no means a bad judge of the physical characters required in the animal sought, and soon his eyes fell upon one in which was concentrated, to all appearance, the qualities so essential for the purposes. Price being asked, and the animal shown through various evolutions, no objection was found. Accordingly a purchase was made and the horse led away.

The new owner had not proceeded far before a stranger, to him at least, stepped up and offered a small sum for the horse, adding, "You'll not like to take him into your stable as he's 'glandered.'" And thus he continued to pester the poor fellow, while others privy to the game joined at various

stages on the road, and kept up the spirit which was to secure again their prize.

Upon examination the animal was found to be a most confirmed roarer—in the language of the dealers, said “to have the bellans”—and had been *drugged* in order to cause the defect to pass unobserved.

Upon another occasion a merchant purchased a very eligible looking animal for his cart, giving rather a high sum to a person who represented himself as a well-to-do farmer in the neighborhood. A warranty of soundness was drawn up by the vendor, signed and transferred at the same time, and a groom removed the horse to his master's stables. For days several men—of course members of the gang—lingered about the premises of the merchant, offering various small sums, declaring the animal to be affected with glanders. The merchant took no notice for some time, but at length said he was very glad he had obtained such an animal, as a friend of his wished to have him, in order to catch the dupes at fairs. This spurred up the gang, who, rather than lose their profitable horse, actually purchased him back again at a sum very little below the original price. This animal was found to be affected with a chronic discharge from one of the nostrils, which had been arrested during the purchase by a *piece of tow* pressed up the passage for the purpose.

These tricks are very commonly practised, and suffer modification in order to render the end more easy of accomplishment. A horse but slightly lame in a forefoot is “beaned.”

This consists in paring thin the sole of the *opposite* forefoot near the toe, and replacing the shoe, having first put a

small pebble beneath it. It has the effect of rendering the action of both fore legs nearer alike, and if properly done succeeds in causing animals to change hands frequently.

Another species of fraud consists in filing down the wearing surface of the front or incisor teeth of old horses, and graving hollows to resemble those of young teeth. This is called "bishoping," but by those who study the form and angularity of the teeth, as well as the varied changes which they undergo throughout advancing age, the trick is easily detected. Young horses are also practised upon, in order to palm them off at a higher price as being four or five years old.

Many breeders who aim at respectability are foolishly tempted to carry out this fraud, which consists in extracting the corner, and sometimes the middle incisor teeth. At best it is but a very clumsy and barbarous plan, and signally fails to produce the appearances desired.

The signs of age are otherwise dealt with, in order if possible to obliterate them. The measures, however, seldom succeed before a practised eye. In animals of great age, large depressions or hollows are found above the eyes, and *horse-copers* prick through the skin and blow in air, as butchers inflate a carcass. For a time the hollows disappear, but are seen again when the air is absorbed or has escaped.

White places, such as a star, stripe, or blaze in the face, white heels or fetlocks, and patches of white hair which are found on the knees and other parts indicating previous damage to the skin, are painted and dyed with colored solutions. This is recognized by the different shades employed and dissimilarity of color to that of the hair over the rest of the

body. Besides, it is usually found to wash off or gradually disappear with subsequent growth of hair.

Animals affected with broken wind are dosed with shot and fat, under the false belief that the former by actual weight causes the stomach to "hang away from the lungs," and the latter "lubricates the air-passages." Neither, however, succeed with the practised veterinarian. The dupes who suffer from these frauds are usually men who rely upon the so-called judgement of one representing himself as a friend, and who contrives to come upon the scene at the moment when his opinion has greatest weight. Under these circumstances, if the purchaser misses an animal which is either "broken-winded," "bisheded," "gypped," "puffed," "blaundered," or has the "bellans," he may have secured a more worthless prize in the shape of a dangerous brute that will shy at everything on the road, kick and bite, plunge and rear or run away, after the passions are relieved of the powerful drugs which have been used. Otherwise he obtains one lame in the back, called by the rogues "a kidney dropper," or another having a nervous affection and known by the term "shiverer."

Being in want of several heavy draught horses upon one occasion, I presented myself at the stables of a certain dealer and made known my wants, but did not discover my profession to him. "All right, sir," said he, "I have just your sort," and addressing his satellite, "I say, Bill, bring out them 'ere cart 'osses in the little stable. "Look there, sir," he began, as the creature was being led out of the doorway, "you never put a collar on sech a piece o' stuff in all your born days. Talk o' pullin', sir, why I never had sech a

'oss to pull. I have been a dealer off an' on for the last forty years, an' I don't know as I've had such a piece of mettle. Put him alongside the wall, Bill, wo ho, now! There! look at his legs, sir! sech pints for a cart 'oss! why he's like waxwork itself! talk about simmertery, did you ever see sech as that? I'm blessed if I ever seed sech a splendid carcass on sech strapping lims, an', lor bless you the money's nothink. See him trot, sir? why, he moves like a pony. Now, Bill, where's your ginger? look alive, my boy, don't keep the gentleman waiting."

"Excuse me, sir," I remarked, "you will have the goodness to spare the animal the torture about to be inflicted; it affords me no gratification, it will not enhance him one atom in my estimation, and let him return to the stall, as his qualities are not suitable for my purpose."

Later in the day several friends, at my request, called upon the dealer and inquired for animals of the kind. All that I had seen were brought out, and upon each occasion declared as before sound and immaculate.

To say there are no honest horse-dealers would be a gross calumny, but I must express my suspicion that many are so accustomed to chant the praises of sound animals—that is, sound to the best of their knowledge and belief—that one may ascribe such a mistake as just related to a *lapsus linguae*. We must therefore look over it accordingly, and of course at the same time the animals upon which such vile praise has been bestowed.

Amongst the defects which are found to lessen the value of horses as well as their usefulness, are diseases of the eyes. An ordinary observer may regard these organs as

perfectly sound, and their appearances justifying purchase, but alas ! finds the animal either suffering from impaired vision, or, may be, totally blind. In such cases the ears will be observed to be carried forward, and their movements are exceedingly rapid, and the eyes staring, the central opening or pupil being wider than in health, and color of the organ probably being blue or yellow. Other conditions are present, which however are only to be detected by those conversant with the different structures of the organs.

Chronic cough, disease of the lungs and heart, stomach, liver, etc., now and then is found to be present. Malformations, the result of accident or vicious propensity, may be detected ; or the beast may be a crib-eater, or wind-sucker, washy, and a bad doer, no matter what he gets to eat. Whatever may be his qualities at work, in the stable he may be a perfect demon, or he may unite the kicker at work, with the "jibber," or one that will not draw.

Another may be as gentle and docile as a lamb in the stable, quiet in harness or under the saddle, and capable of doing the highest rate of speed with action and grace unparalleled, but the pleasure of sitting behind such a creature is marred by the fact that on reaching the stable the appetite is gone. The animal is overdone ; and be careful as you will, the scene recurs after each journey, and is sometimes supplemented by irritation of the bowels, colic, etc.

Several days are passed before the animal is pronounced safe for work, or still further cause for dissatisfaction appears in a variety of ways ; and no other conclusion is justifiable, than that the animal has been sold on account of these faults.

He is sold again quickly if death does not prevent the opportunity.

In the multitude of conditions which render horseflesh (in a state of animation, not as chevaline *a la mode*) such a ticklish commodity, one cannot but be surprised at the few opportunities there are to avoid the disagreeable consequences. Many purchasers, relying upon their judgement alone, make fearful work. They know nothing of the nature, form, or habits of the animal they seek, and consequently become victims. To purchase horses in a profitable manner requires much tact and judgement.

Bribery in horse-dealing.—Like horse-racing, horse-dealing practice is carried on more for the emolument derived, than for any desire always to distribute a good and serviceable breed of horses. Many patronize the turf under a mistaken idea that present systems improve our breed of horses, but by far the majority have personal interests only to serve. Horse-dealing often assumes the latter in the blackest dye. Upon the turf, races, horses, riders, and owners are *sold*, and in the trial ground of many dealers the like also occurs.

Bribery is one of the greatest banes which waits almost upon every transaction in reference to horses. They cannot be shod, physicked, sold, nor exchanged, but a host of parasites hover round, "for wheresoever the carcass is, there will the eagles be gathered together." If there were no receivers of bribes, there would be no one found to offer them.

Warranty.—By some there is entertained a great but fancied security in a warranty. Half that are given are but as waste paper. Many cases are on record which proves

this: one will suffice. A warranty of soundness had been given with a horse having spavins and side-bones, and there were not wanting witnesses who would swear no such morbid conditions existed. A law case followed, but as usual, he who won, actually lost. The defendant, although guilty and convicted, was not worth the paper upon which the summons was printed, and a poor widow was doubly a loser in consequence.

Certificates of Soundness.—A very common mistake occurs with many when purchasing horses; that is, to seek a veterinary surgeon's opinion *after* the contract is completed. This does not always occur only with low-priced animals, but frequently with those of high value. They are examined and found defective, but there is no help in many cases, and the affair amounts to so much money absolutely thrown away. Purchasers who desire a professional opinion upon the soundness of horses should *always* obtain it *before* the animal becomes their property. The proceeding is advantageous in many ways, and much trouble and petty annoyance is avoided.

The certificate given by the professional man proves as powerful as a warranty; because in the event of unsoundness, the dealer cannot sell his horse. In case the animal is sound, the purchaser receives an assurance to the effect, and nothing further is needed, as the whole thing hinges upon the question.

PRECAUTIONS TO BE OBSERVED.

The intending purchaser of a horse has a difficult task before him, and will do well, if he be no judge of horses, to

consult a friend who really understands* the matter, and act by the advice of that *fidus Achates*. Let it be remembered, however, that, in the matter of the purchase of horses, there is frequently not wisdom, but bewilderment, in a multitude of councillors ; and, above all things, are to be avoided the *ex parte* statements and strictures of grooms, who are frequently glad to give themselves airs of wisdom, and to obtain a credit to which they are not entitled, by pretending to discover in a horse blemishes, faults, and vices, which have no existence save in their own imaginations. Not unfrequently, also, people of this class levy contributions upon horsedealers, in guise of commission, and their opinion is not a little influenced by the manner in which their application for blackmail may have been received. Therefore, a commercial or professional man, in buying a horse should be content to rely on his own judgment or on that of *one* competent friend, and not allow himself to be swayed by "every wind of doctrine."

Above all things the purchaser of a horse should avoid that pernicious system of bargain-hunting—that insatiable desire to get more than money's worth for money—that almost invariably ends with disappointment and discomfiture in the purchase of horses, and in every other transaction on which it is brought to bear. The persons who crowd the newspapers with advertisements of horses about to be sold at ruinous sacrifices are, in ninety-nine cases out of a hundred, small dealers of loose principles, practising on the credulity and weakness of the unwary. A good horse will fetch his price like any other saleable commodity ; and it is not to be supposed that sharp dealers, accustomed to trans-

actions in horseflesh, are ignorant of the best quarters in which to effect a sale, and of the price a horse ought to bring. The only conclusion, therefore, at which we can arrive is, that the horse vaunted as "going at a ruinous sacrifice," are not what they are described to be ; for, were they really valuable animals, there is no earthly reason why the said ruinous sacrifice should be submitted to.

The principal points to be attended to in selecting a horse are temper, good formation, and spirit ; and if soundness, you can select an animal with all these essential qualities combined, you may rest assured that you are in possession of an invaluable animal. For whatever purpose you require a horse, always see that he can perform it correctly before you strike a bargain, and, if convenient, ride or drive him yourself. It is always best to have a trial prior to purchase.

Consider well for what work you intend him. If you want him for two or more purposes, judge of his qualities with reference to the most important. One caution we must particularly impress upon the buyer namely, *not to expect too much* from his horse at first. When a purchaser has discovered that he has bought a horse which he believes will not suit him, the best thing he can do is to impart the discovery to the one who sold him the animal, and to *nobody else*. If he has indeed made a mistake he must be prepared to pay for it, but he must not be in too great a hurry to come to that conclusion, for good grooming, good food, and plenty of fresh air and exercise would probably make the animal in time all that his purchaser could desire.

CHAPTER IV.

Size, Age, Pace and Temper.

ORSES for the road should never be under fourteen hands high, rarely less than fourteen and a half, and never above sixteen. As a general rule fifteen hands and a half should be the extent. If your horse be required to draw a light wagon without much incumbrance he may be small and the better for being three parts blood. Where there is more weight to contend against, you must choose a heavier horse. Bear in mind that, as a rule, there must always be weight to contend with weight. A heavy animal, by merely throwing his bulk against the collar, materially assists in moving his load, while the lighter one, if over-weighted, has all to do by muscular power, which soon becomes exhausted ; for in the latter case, the horse is continually straining to effect by violence that which in the former is accomplished by weight only. Otherwise, give each horse his burthen in proportion to his weight, and the blood horse would kill the other in a very short time. For the heavier loads, therefore, speed and breed must be abandoned for weight ; and the horse must have the round arched neck, large rotund barrel (or body) and rounded hind quarters.

AGE.

Under this head much prejudice exists and many false notions prevail. One person supposes that if he buys a horse when he is young, it must last him so much the longer than if he had bought him at a more advanced age. Others, again, imagine that having purchased a young horse, they are not likely to be serious losers by him, if they sell him again while the mark remains in his mouth. This may be all very well with those who have more horses than they can possibly exercise, and which are, therefore, unused to a day's work.

Now, the horse must be from seven to eight years old to put him upon a par with a man of twenty-one. Yet people are so misjudging that they imagine the horse is better calculated for hard work, before than after the age mentioned. If experience could teach them, they might readily perceive the younger the horse is, the sooner he will be strained and worn out by being overtaxed. Where the work is light (carrying no heavy loads), and the stay frequent, at places no great distances apart, and provided you drive moderately, a six year old horse may suit your purpose ; that is, if you are particularly anxious to have a mark in his mouth ; if not, one of seven or eight would be preferable. In cases where the loads carried are light, and you do not often rest any length of time on your route, or if your vehicle is heavy and you do not drive at a very moderate pace, never choose a horse under eight years old, and then he will last you longer and serve you better than any young one. Stage-

coach proprietors, and all great dealers in horses, do not consider them aged until after their sixteenth year; and provided they have not been subject to ill-usage, they will be found sound and in good condition long after that period.

It must nevertheless be admitted, that horses may also be too old; but so long as they are sound upon their legs and keep up their condition, they are always better suited for hard work than young ones.

Up to a certain number of years a horse's age may be detected by examining his mouth. Thus, at the age of five years, his teeth will be disposed in the following order:—In the front of his mouth are six incisor, or cutting teeth, in each jaw; next to these two canine, or tearing teeth, in each jaw; and at the back of his mouth, twelve molar, or grinding teeth, in each jaw; in all forty.

In the centre of each incisor tooth appears, when the horse has attained the age of five years, a small cavity with a dark mark; and by this mark the experienced purchaser knows that the horse is at least five years old. The marks themselves vary with the horse's age; at six years the dark mark in the front incisors will have grown up and become of the same white color as the outer walls or edges; when the horse is seven years old, four of the middle teeth are filled up. In another year, they are all level and white; and the wearing down of the canine teeth also gives token of the advancing age of the horse. In some cases, the marks in the upper jaw last a few months longer.

From the fact that some horses do not show their age except in the teeth, has arisen, among unprincipled dealers

and stablemen, the reprehensible and cruel practice of "bISHOPING," already alluded to.

PACE.

"It is the pace that kills," observed Lord Forrester, and all who are obliged to keep horses for their livelihood, would do well to bear this maxim in mind ; and also to remember that the pace which is slow for one horse, is fast for another, and *vice versa*.

Should a person have a horse capable of performing sixteen miles within the hour, still from eight to nine would be quite enough to work him as a general pace. If, however, you wish to keep up his full pace, you may put him to his speed for a few yards occasionally ; but vain would be the hope, with daily hard wear and tear, to keep him to that pace for a constancy. Make your paces moderate according to the utmost speed of your horse, and agreeing with the weight you require him to draw, and with regard to the distance you may have to travel daily. But when you buy an aged horse, the best plan is to leave to himself the choice of his pace ; and he will then adopt the one he can endure the longest. Put him out of his own course, and you soon tire him.

There is yet another reason, and an important one, for selecting old horses, they know their business, and will do it properly if left to themselves, while two young horses (a master not used to horses, and a horse not used to work), coming in contact on the road, are very likely to be productive of an accident, from each being equally ignorant of the meaning

and intentions of the other. Who would set the blind to lead the blind? Many serious accidents are to be attributed to the cause now assigned. Some men are very fond of racing on the road, priding themselves on their horse's mettle. This is, to say the least of it, a very absurd and dangerous practice. Now, the top of any horse's pace must be his utmost speed, whether it be six or sixteen miles per hour; and if your horse can do only the six, and you keep him on at that rate the one hour through, at the end of that time he will have performed a task as great and nearly as distressing to himself, as another horse that has accomplished the sixteen miles in the same period. It may perhaps be said that six miles an hour is an exceedingly slow pace for the speed of a horse's trot; but the object of this argument is to show the absurdity of supposing that horses can go beyond a certain or natural pace, for any distance, without being distressed, and consequently injured. All beyond this is artificial, as any rate of speed must be that requires particular attention or training to accomplish it. The horse that does the sixteen miles after so much care and preparation might have done nine or ten without any such means having been used, and with ease to himself. The latter, then, would be his natural pace, and he should not have been forced beyond it.

Horses that can be pushed to ten miles as their utmost pace, *without training*, would do from seven to eight as their natural pace. They ought not then to be urged beyond this as their customary rate, at which they will continue to make ordinary journeys, day after day for a long time, without losing their condition, or with much injury to their constitu-

tion, though requiring that attention to be hereafter recommended.

The observations just made on the artificial and natural paces of horses, are intended as a guide to those who use them under seven and eight years old. After that age, they generally acquire an uniform pace, which is their natural one, at which they will continue a long period, and perform their work comfortably. Put them out of this pace, and they soon begin to show fatigue, in comparison with their strength and vigor when left to themselves. Yet even under mismanagement, they will beat younger horses, if the latter have been equally subject to ill-treatment.

Should you meet with a horse of the age required for your purpose, with his legs and feet in good order, but his paces uncertain, it is a proof that he has not been in respectable hands, and that his owner was no judge of horses. You have, therefore, to train him into his regular paces, and in so doing be careful to observe the foregoing rules. Old horses with this irregularity of pace must be examined with more than ordinary caution, as there is the greater chance of their being unsound.

TEMPER.

Avoid a dull horse for the road. There cannot be a greater annoyance than to find a horse rather inclined to stop than to proceed; and to be always applying the whip to the sluggish animal is not only absolute drudgery, but it makes him daily more stubborn and indifferent to the lash. Vicious horses should also be particularly avoided for the

road, a kicker may damage your vehicle and detain you some time to get it repaired ; to say nothing of your own personal risk. As a precautionary measure, it is prudent always to use a kicking strap, even with horses that have hitherto shown no disposition to kick. Nor can persons who are obliged to go occasionally into strange stables, where there is a number of horses, be too cautious in guarding themselves from the effect of vice in some of these animals. It is necessary very often for persons to go into the stable to look to the condition of their own horses, and without due care it is possible they may receive at one time or other an ugly kick or bite from some horse with which they are unacquainted.

CHAPTER V.

On Carriage.

OR use never buy a high stepper. It is erroneous to imagine that safety depends on this ; so much so, that all tumble-down and stumbling brutes usually step high, while the daisy-cutter, or horse that would kick a six-pence before him rarely falls. Both are evils as extreme, and, therefore, as in other cases, the medium is the best

rule. The horse that unnecessarily lifts his feet too high batters them in treading, producing inflammation, besides fatiguing and wearing himself out by overstraining his muscles. The daisy-cutter is liable to a degree of inflammation about the feet, causing him to go lower than he would naturally, in order to lessen the concussion of his feet with the ground and prevent the pain of lifting his legs. With sound horses, a practised judge would in time make them step as high as he pleased; but all this lofty action is at best but artificial and only tends to tire and jade the animal.

These remarks will also serve to show, as in our observations on the pace of the horse, that only a certain degree of exertion can be used with impunity; or the capability of repeating such muscular efforts at short intervals would be impossible without serious injury. Nor can what has been already said, in a preceding page, be too often or too earnestly impressed on all persons entrusted with the care of horses, who appreciate their usefulness, or who would preserve their value. Leave the action of the horse to himself, or, in other words, to nature. When you are going a journey, care not how the horse carries himself, so that he does but carry you. When you have time to play with your horses is the time to attend to the animal's carriage.

CHAPTER VI.

The Mouth.

MUCH of the satisfaction which a horse is capable of affording his master, depends upon the way in which the latter manages his mouth. As the lasting qualities of the horse, as well as his temper, appetite and endurance; the safety of life and limb, all depend in a great measure upon judicious treatment in this important respect, no apology is necessary for offering a few observations on the subject.

With regard to *making* the mouth of a horse, or teaching him anything new, or improving his paces, the first thing to be observed is, that he must be fresh, and only taken out of the stable for a short time at every lesson, while being taught and until he is completely fixed in that lesson, or all the labor will be in vain. It is the mode of teaching them that makes horses which carry themselves well, valuable; and because there are few qualified to teach and still fewer to use them judiciously afterwards: but if once set by a good hand and accustomed to a good jockey, it will be long before they lose the habits they have been taught. But if only recently set, and then put to hard work, under an inferior

hand, their good carriage will speedily vanish. This is also another reason, in addition to those already adduced, for preferring aged horses—the age recommended for work—as the carriage they have at that time they will probably continue to retain, unless dreadfully overworked indeed, or used in a way contrary to nature, instead of being left, as recommended, as much as possible to themselves; for the best carriage in the world may be easily spoiled.

First, then, as you cannot accommodate your hand to the horse's mouth, nor are able to make his mouth acquainted with your hand, furnish him with a bit in which he can go comfortably; then let him keep on at his natural pace, never urging him forward, except you find him *coming within your hand*: that is, if he keeps himself from letting you feel that he is touching the bit, do not make him press hard upon it, as by so doing he would be used up. To urge him to pull one or two pounds at your hand is pull enough. Keep in mind the necessity of a *steady rein*, just bearing sufficiently upon his mouth to make him sensible of control. Never jerk a horse's mouth or flap him on the back with the reins.

CHAPTER VII.

Management of the Feet of Horses.

 AFOSSE, a celebrated French veterinarian, said "*Pas de pied, pas de Cheval,*" which is, being interpreted, "No foot, no horse." To preserve the foot is to maintain the capabilities of the animal in a remarkable manner. Its anatomical structure is of the most wonderful character, and suggests the advisability of greater respect than is usually paid to that important part.

The feet of the horse are of the utmost consequence, as on the state of these his value in a great measure depends. He should not only have a good foot for the present, but one likely to stand all the beating, battering, pricking, and bruising to which it is exposed on our stony roads at almost every step. Here is another cause of wonder, that we have not more lame horses than we have, particularly as most lamenesses are produced by concussion. Nature, however, has wisely ordained a provision to guard the animal creation from numerous injuries to which it would otherwise be liable; and so she has in the present instance. The horse bred in high and dry situations, in which the soil is of a hard, stony, or rocky description, is framed with a strong obdurate hoof, very subject to contraction. This, then, is the

foot best adapted for the purposes of the road. But nature intended that these animals should go over the ground in their own way, and that when they found one pace hurt their feet, they should be at liberty to change it for another ; or that if their feet became bruised, or over-heated, they should find no impediment in quitting the rugged and sharp path for the cool and velvet grass. But man has arbitrarily, though necessarily, reversed the benevolent design of nature. It is, perhaps, superfluous to enquire how road horses are now generally treated ; but in an essay expressly written on the subject, nothing growing out of it of interest should be omitted. In the first place, they are shod with iron shoes, which are not only conductors, but also retainers, of heat. Next, instead of allowing them to choose their own paces on each particular piece of road, those paces are chosen for them ; and not only so, but likewise the road itself, which, perhaps, neither man nor horse would have voluntary selected with reference to the animals feet.

If, however, there be a remedy for this, or other evils, relating to the horse, it behoves us to adopt it, in gratitude for the many services rendered to us by that useful animal. We ought to save him, not only all the pain we can, but as much as possible of inconvenience. This we have the means of doing to a considerable extent in the particular case before us, and the mode of relief is pointed out by the horse itself, when in a state of nature. Having in that state travelled over hot dry ground, some distance, he will stand with his feet for a short period in the first water he can find, he will then remove to some plot of cool grass, on which he will abide till all heat (inflammation) in his feet has evaporated.

Now, what is the general treatment on a burning day, when the animal has arrived at the stable door, to which his feet are subjected? It is this. They are often just damped over, sometimes merely wiped, in order to take off the dirt, with a wet sponge, and he is then led to his stall, to remain there until he is again wanted, on hot dry litter. The litter is commonly very bad, as it gets dry between evening and morning, and it then hurts the feet; particularly if any of it, however small the quantity, be allowed to remain between the shoe and the sole of the foot, inasmuch as it will prevent the firm descent of the sole, and is sure to cause lameness. We may use *ad libitum* that which the horse himself has pointed out, namely, WATER, which can never do harm. The best way of using it is as follows:— Get a piece of serge about eight inches deep and twelve long, for each fore-foot; soak the serge well in water, and then apply it, while spread and open, the long way, round the pastern; next pass a piece of list loosely round the middle of the serge twice, then tie it and roll the top of the serge over the list. This being done to both the fore-feet, then soak each foot, bandage and all, in a pail of water, wetting them the last thing at night and the first thing in the morning; as well as at other times, when the bandages may be getting too dry, or on occasions when the horse may remain longer in the stable than usual, or has a day's rest. This practice will never be found injurious; and should there be at any time more than ordinary inflammation in the feet, and if it be not convenient to give the animal a day's rest, it would be advisable to drive him with the bandages on, and be sure to keep them wet.

Where the feet or hoofs are very strong, it is always best to drive the horse through the summer months, with only tips, or half or three-quarter shoes as the case may require. When the latter is used, the inside heel is to be free from iron. Corns and thrushes are often cured by this treatment, the heels much opened and the feet altogether improved. But to no kind of foot is it of equal advantage as to the very strong, crusted, contracted, brittle foot, which *clever* grooms, in order to make it last for ever, have spoiled by their oils and their stoppings, thereby preventing perspiration, thickening the horn and producing fever.

Never allow the feet of your horse to be oiled, or blacked or polished. Either is extremely injurious, and is never done but by *lazy* fellows, who wish to make the hoofs appear as though the proper labor had been bestowed upon them, when the reverse has been the case.

Never buy a horse with pumice soles, for any other than slow purposes. This is a disease which has been brought on by violent inflammation of the feet, destroying that support which ought to subsist between the sensitive part of the foot, and the crust through which the horse throws all his weight upon the sole of the hoof, pushing it downward, and rendering him subject to severe concussion at every step. A horse of this kind is, therefore, unfit for travelling, as it is impossible to tell where, or how soon, he must unavoidably be left behind.

It is an excellent plan, particularly in cold weather, when a horse comes in heated, to have his feet and legs, (but not higher than his knees) washed with warm water, and then a bandage put round the legs till they become dry. If the

bandages be dispensed with, then should the legs be rubbed until all external moisture has been removed, especially in the fetlock. This will always prevent cracked heels, and where symptoms of these have already been observed, they may be mostly cured, in two or three days, by an application of an ointment consisting of a little burnt alum and hogs lard. If, however, they should not get better, under this treatment, in the course of four days, just wet the chaps with vinegar and a slight admixture of blue vitriol. Under proper care, the cracks will be washed clean and rubbed dry the moment the horse gets to his resting place, and the above application is used immediately afterwards.

In shoeing horses' feet it is a mistake to cut, burn, and rasp them as much as is usually done. It must be remembered that scraping or biting our finger nails renders them sore and useless as a defence or means of prehension. How much more then do we render the hoof of a horse, by these reducing measures, unable to act as a means of defence and resistance to bear the weight, and hold the nails by which the shoe is attached? The better the foot, the better must be the protection. The animal will perform his work more readily and with greater safety, and last longer. There is more mischief occurring (and nothing causes a faulty shape as soon) from the practice of reducing the hoof than from any other plan adopted.

Each part of the hoof is possessed of different properties. The outer part, the wall or crust, grows downward, and the ends of the fibres of which it is composed are presented to the ground. On this account it is more resisting to the wearing forces, and does not fall off in flakes or scales.

The ends of these fibres, or, in other words, the *ground surface* of the wall or crust *only*, should be absolutely cut away, and that principally towards the toe, where the greatest growth usually takes place in health.

The *sole* and *frog* are capable of what is termed, exfoliating, or, in other words, detaching their waste parts in flakes or scales. None but loose portions should be cut away. These parts are quite capable of their own reduction, and need *no* interference. When shoes are being fitted do not apply them too hot, particularly to thin, shelly feet. If the feet are good, and no cutting is carried on, as just directed, a hot shoe will do little harm.

Use well-drawn nails.—Thick-headed nails “bind” in the holes of the shoe, and frequently press upon the sensitive structures of the foot, causing severe lameness. Besides, they act as perfect wedges to the hoof, splitting off portions to its detriment.

Let the nails be pointed with a long lead, and nail holes in shoes be course, *i. e.*, not too near the outer web or edge. In this there is less danger of laming horses than by the fine seam and snub pointed nail. The former nail is driven *straight down*, always having a tendency to go *away* from the sensitive structures, but the latter has to be driven *inwards*, by which it is almost certain to lame by a “prick” or “bind” as it approaches too near.

Shoes should always be made to possess a perfectly level surface for the foot to rest upon. That part of the foot which comes upon the shoe is to be the ground surface of the wall. No part of the frog or sole need touch the shoe.

The *shape of shoes* is an affair of little moment. There is no call for beauty or grand work. The secret of shoeing is to afford a protection which the hoof alone cannot give, and that is the point to study.

Stopping for feet is quite unnecessary. Grooms and smiths call loudly for stopping in order to pare the foot easily, and forget that as they pare, the horn dries more rapidly, and therefore is the harder. Let them try the method already laid down, and they will find the foot is *soft* beneath the scales which fall off as soon as the shoe is removed, showing that nature uses her own stopping.

Horses' feet should always be kept as dry as possible when healthy. Their natural condition of usefulness as a protection consists in being hard and bulky. If disease overtakes them, poultices and fomentations are then needed, as prescribed by the veterinarian. No greater mischief occurs to horses' feet than that which arises from the effects of wet straw yards and pastures. The salts that are in the fluids found in those places reduce and dissolve the hoof, and render it unfit as a protection. Such places are best avoided unless well drained.

Foot ointments when properly made are very useful. Equal parts of Stockholm or Archangel tar and mutton suet are to be melted together, and a small portion brushed round the hoof each day. This will be found the best and cheapest preparation.

Foot ointments find their basis in the Archangel tar very properly. That agent prevents evaporation, and promotes the necessary elasticity of the hoof. Grease and fats with other admixtures are very prone to render the hoof brittle.

As for curative effects being produced on the sensitive part by dressing the hoof outside, there is no evidence to show beyond what quackery swears on false premises.

Cutting, Brushing, &c.—These are terms by which is understood that damage of greater or less extent is inflicted, generally at the fetlock of one leg, by the opposite foot during action.

In the former case the skin is usually cut or very much bruised, and great lameness occurs, while in the latter the hair is slightly removed from the surface by attrition, and the skin suffers in a less degree. Horses, however, may “brush” for some time, and suddenly become desperate cutters in consequence of repeated injury being done to the parts.

Cutting sometimes takes place in animals with high action, when the toes are naturally turned inward, and the foot is carried towards the opposite leg. In this case the seat of injury is below the knee, and great lameness occurs, sometimes attended with permanent swelling of the bone, called a “splint.”

The causes are generally traceable to preventable circumstances. Animals are either out of condition—weak—or they are driven too fast and worked too hard in a variety of ways. The victims are usually the horses of butchers, bakers, and other fast drivers, omnibus and car horses especially—in fact, cart and other horses will be guilty of the practice if badly kept and harrassed about. When work is prolonged too much and animals are heavily shod, they become “leg tired” in stable phraseology, and the action becomes slovenly and false.

The remedies are careful feeding and work at all times, but especially when the latter has been unavoidably prolonged. In the matter of shoeing much may be done. It is the fancy to place upon the feet the most fantastic, and even the most clumsy shoes, and there are scores of smiths who may be found ready to accept a wager "to take any horse off the cut." There is no need for these, or even to mutilate the hoof, as is too commonly done. If great lameness arises, let the injured parts receive immediate attention, and keep the animal at rest. Next, place on the feet *very light* shoes, and when put to work let common humanity prevail. Horses are not machines or steam engines, that they can go incessantly; if their periods of labor are not properly regulated, and the amount be too exacting, the animal constitution must give way. To those who are willing to recognize early signs of degeneracy, we beg to name cutting and brushing; if they are not attended to, further aggravation is succeeded by serious complications, as broken knees, fractures, &c., to the animal, besides others of an extraneous character.

Groggy feet, or those understood to be affected with disease of the coffin joint, require special treatment, in order to limit as much as possible the suffering of the animal.

Groggy feet do not require shoes of great weight. They should be rounded off or turned up at the toe to diminish leverage in the first act of progression. In the variety of horse most subject to this disease, five nails, or even fewer, may be sufficient to hold on the shoe, as the foot is always very firm, and the animal cannot endure severe exertion. A light hammer should be used, and the blows sharp and in

rapid succession, to avoid shaking, which always occurs with heavy tools used without caution.

The feet are to be prepared according to rules already given.

For *ring bones* the toes and heels of shoes should also be kept low, in order to avoid concussion.

In all cases, however, where these affections are of long standing, and medical treatment produces little or no good, lameness being persistent, the animal will be of scarcely any service for town work. It is best to place them upon soft land in the farmer's hands, where many kinds of light work may be performed without any sacrifice of feeling or increase of suffering to the animal.

Under certain aggravated conditions of the three forms of disease we have been considering, the advice of a veterinary surgeon should be sought as to the policy of such animals being retained whose life can only be one of protracted misery.

Pumiced feet, so called, are of frequent occurrence among cart horses, but others also are liable when mismanagement occurs. The appearance which give rise to the term are convexity of the sole and concavity of the wall, with great tendency to elongation towards the toe. They are the outward manifestations of an inward diseased state of the censitive and secreting structures—hence the deformed shape and growth.

Shoeing may greatly palliate the case. Nothing is known that will cure it. Use daily dressings of hoof ointment, inside and out, after the foot is cleaned, by which means

many animals will be enabled to perform a great amount of work with ease and cheerfulness.

Pricks and binds are the natural consequences of the system of shoeing with nails. Some persons ignorantly suppose they can only occur from carelessness. They must, however, be informed that workmen of the best class, well known for their superior skill and care, are liable to cause lameness by a prick or bind of the nail in shoeing. There are many causes for it, most of which are beyond his control.

At this stage, simple matters would set the animal sound in a few hours, but alas ! too frequently delay occurs, or some quack treatment is pursued, and at length matter issues from the coronet, and the foot is deceased and disfigured for life.

In all cases of lameness, the shoe should be removed, and foot properly examined by percussion with the hammer, and pressure by the pincers. The situation of nail holes in the hoof will determine if some are too near, and evidences of pain will usually point to the part under trial.

If the lameness is not great, mere removal of the shoe and nails will mostly be sufficient ; or a warm poultice of bran and sawdust may be applied for twelve hours. If, on the other hand, the pain and lameness be excessive, having *gradually* increased in severity, matter may be suspected to be present within the hoof. Exploration with the knife should follow percussion and pressure, by which the precise spot will be detected, and exit thus given to the imprisoned pus will afford almost instant relief. Poultices preceeded by hot fomentations will be required, besides other treat-

ment, to allay febrile excitement and expedite the case, for which a qualified veterinarian is best to dictate, according to existing circumstances.

It is advisable in all cases of lameness to apply at once to a veterinary surgeon ; much tediousness and disappointment as well as expense may be avoided. As in many other cases, “the first cost is the least in the end.”

The shoeing of lame horses requires special measures, and could not be treated any further in a work of this kind without extending it beyond ordinary limits. The instructions already given will in greater part be found applicable. By their observance much harm may be avoided, and the usefulness of our valuable servants greatly extended. Brittle feet, so called, may be wonderfully restored in a short time, the falling off or losing of shoes greatly avoided ; and remember that the greater evil exists in doing too much, rather than knowing what should *not* be done.

CHAPTER VIII.

Exercise.

NE of the greatest sources of health among horses is to be found in exercise. By that term we understand exertion or use of organs of locomotion, as the legs, etc., and other parts of the body more or less, not strictly called work. Exercise, or the use of the body, is intended to be engaged in at those times when the animal capabilities are not required for work. It is a duty which relieves from the close and monotonous confinement of the stable. Horses kept for a length of time without action suffer in a variety of ways. The circulation of blood is languid, digestion of food retarded, fluids which in health are formed in various organs of the body for the purpose of changing substances and rendering them fit for the system, are not poured out during continued rest with sufficient activity. Muscles become soft and flabby, and such an animal is thoroughly unfit for work or exertion of any kind; he is soon tired and used up. The skin looks dull and rough, the bowels are constipated, and he becomes a prey to disease of various kinds.

Exercise must not be confounded with actual work. The two are totally different. What work takes out of the system, exercise is intended to build up and strengthen. Exercise stimulates all the energies of the body and promotes strength and vigor. It causes all the tissues of the body to receive their support by reason of the tone given to the circulation of the blood, and digestion and appropriation of food. Work, on the other hand, goes farther than this, and lowers the body—causes it to waste or wear out. On this account therefore exercise must be a duty which promotes health by stimulating all the animal functions, but stops short of producing weariness or exhaustion. It renovates the body, and makes it ready to encounter excessive and prolonged exertion, which we call work.

Exercise should be taken regularly. All horses not intended to go to work ought to receive an amount of exercise daily. It is not necessary that the time spent should always be the same, nor is it proper that it be prolonged too far, as it then ceases to be useful and beneficial.

Usually walking exercise only is taken, and in most instances is found to answer all purposes. If, however, a trot is indulged in, horses should never be hurried, or during a canter put so fast as to “blow” them, nor should the distance gone over amount to more than one-quarter that used for walking.

Truck-horses, those used for cabs, omnibuses, spring-carts, and sometimes even carriage horses, do not receive exercise as frequently as they should. Many of these animals suffer immediately when confined to the stable but even a single day. It is a common thing to find cases of weed or thick leg oc-

curing with unerring regularity on Monday morning, not unfrequently also colic, and even founder or inflammation of the feet.

Such horses, although coming to the stable tired at the week end, would be certainly *benefited by a walk of three or four miles on Sunday morning*. The time occupied would admit of the stables being thoroughly cleaned, the animals would obtain fresh air instead of breathing noisome odors during the operation, and in many cases ward off the attacks mentioned.

When horses come up from grass, straw-yards, or rest on green food, etc., the amount of exercise at commencement should be very limited, and gradually increased until the full amount is taken. Our further remarks in connection with exercise will lead us to a consideration of what is understood by condition.

CHAPTER IX.

Condition.

HE object of exercise is the preservation and maintenance of that healthy state or general capacity for work which is known in stable technics as condition. To

acquire it, good food, pure water, well ventilated buildings, scrupulous care and regularity in all stable routine, and exercise in the *open air* are indispensable.

Early morning is usually chosen, sometimes the exercise is apportioned, one part to the morning another to the afternoon. This also admits of other work being carried out, which would not be done if all the exercise were taken in the morning.

The usual process of getting a horse into condition, consists in the use of certain doses of physic. Some grooms go so far as to assert, "No horse can be got into condition without physic."

The Turkish bath is also by some used under the idea that there is something always to be got rid of which militates against condition, and the poor creatures are parboiled and sweated unmercifully.

The art of getting a horse into condition lies totally apart from either of these processes. Hundreds of horses are brought forward every year without them, and on the score of what *can* be done, and *is* done every day of our lives, we appeal for our noble servant, and beg he may be spared this useless and aggravating treatment, except when illness demands it.

Condition is that state of the muscular system in which the body is strong, healthy, and capable of endurance under prolonged action. Muscle has to be built up and thoroughly developed. Every one knows the blacksmith's arm or the legs of the *danseuse* become thicker by the exercise. Their action stimulates their growth, and when after a time

they are so developed, they may be said to be in perfect condition.

The muscles of the horse also admit of this gradual development. It is caused by their being regularly exercised and drawing to them the nutrition from the blood which has first been put into that fluid from the food. Regular exercise causes the body to rid itself of all hurtful substances. Good food produces good muscle; and unless there are special circumstances to consider, nothing else is required to produce condition, excepting regularity of system.

The effect of physic is to weaken the system and retard the development of muscle and formation of good blood. They are similar to bleeding, but a little less intense. Physicking horses in order to get them into condition is carried on to an absurd degree, as many as three doses of physic being given to one animal prior to the season in the space of a few weeks. The first ball was said to stir up the humours, the second to set them moving, and the third to carry them off, and, it frequently did so by carrying off the horse as well.

CHAPTER X.

Feeding.

THIS is one of the most comprehensive subjects connected with the keeping and management of horses. *All food should be of the best quality and kind.* If inferior kinds are purchased, and require disguising by some process to make them palatable, the sooner he who purchases such is removed the better.

The food used for working horses are those cereals and leguminous seeds which, usually denominated corn, consist of oats and Indian corn, together with hay, straw, bran, and green food.

These vary much in their properties as well as nutrition, and on that ground alone arises the question "What kinds are best, and what proportion should be given?"

Most persons are aware that corn should be thoroughly dry for feeding purposes, otherwise inconveniences occur in the form of indigestion, colic, weed, grease, or loss of condition, etc.

Besides, in purchasing that which is not dry, or seasoned, a decided loss occurs, which buyers should avoid by securing a reduced price in accordance.

Whenever grain of good quality can be secured, it should be bought and stored up, to ensure its being thoroughly dry. Oats should be heavy in the hand, devoid of thick husks, and short and plump in the kernel.

The method of economising food consists in using a *variety of grain* instead of one kind, and that exclusively of oats. Some have tried the different leguminous kinds also separately, but found them inefficient in economy, and even injurious.

A farmer of my acquaintance having about thirty horses, purchased, at a cheap rate, a quantity of Indian corn, under the idea that it would effect a saving in the cost of feeding. On the contrary, the health and condition were greatly sacrificed.

Similar objections may be urged against other varieties of food when exclusively used, particularly in their liability to produce disorder of the digestive organs.

We are also taught practically that a loss of condition and proneness to disease is brought about by food containing too little nutrition, when the demands upon the system are excessive.

A mixture, therefore, should be regulated by special conditions. Due consideration is to be given to the nutritious matter contained in each ingredient, and as a whole, the amount and character of the work, and quantity allowed to each animal.

We find that food is nutritious when it can minister to the formation and development of the body, and maintenance against waste; while substances of a mixed character are needed in order to keep pace with the requirements of

the body in the production of a necessary temperature, and assistance in the accumulation of vital force.

Food, rich in mixed characters, supplies the necessary elements without disturbing the balance of the functions, which occurs when too much of one kind is given indiscriminately. All vegetable food is of a mixed character, but each kind differs in the richness of its constituents, and we are thereby taught that the animal economy can live and thrive only upon food provided *naturally*, and which contains all the elements calculated to minister to the tissues and functions of the body.

In travelling great distances, it will be better to feed about every ten miles; let the horse then have a few mouthfuls of hay and as much water as he chooses; with a feed of corn and water at the end of every twenty, or thirty, miles; making the intermediate distances as convenient as possible. The horse will be rarely incapacitated, so long as he retains his appetite; and, if thus fed, he must be exceedingly over-worked (provided he have any pluck and be properly driven) if he lose his appetite.

There cannot be greater folly, or something worse, than in boasting of having driven a horse fifty miles a day, *without feeding*. To say nothing of the cruelty of such usage, what state must the horse be in the next day?

Let him not be restricted in water, until he is inclined to eat. Should he not be inclined to eat without an immediate quantity of water, drive slower for the next few miles; six quarts of water in many cases, will not inconvenience a horse more than a glass of beer would a man.

It is scarcely necessary to observe, that attention to frequent feeding is the more necessary in winter. Some persons object on account of losing time, too feeding to often. This objection, however, is perfectly frivolous. To call at an inn door, and get the ostler to undo the curb, and have the bridoon taken out of the mouth, while the horse drinks, and eats a few mouthfuls of hay, need not occupy more than three minutes; while the renewed freshness of the animal will amply compensate the delay and the expense. Persons who are so unfeeling as not to be able to afford time to feed their horses find ample leisure to refresh themselves much longer than it would be necessary to reinvigorate the partially exhausted frames of their faithful and hard-working nags. Besides, attention to the natural wants of a horse must of course preserve his vigor, and increase his ability to perform his daily duty. To neglect a matter so important as that of supplying a proper quantity of food, is the same as deliberately contriving the destruction of the poor animal. Under all circumstances, therefore, if the traveller desires to preserve the health and mettle of his horse, he will always refresh his nag when he needs refreshment himself. It is proverbial that a good master is always merciful to his beast.

Advantages of proper food and regularity in feeding.— My experience, and that of others who have devoted attention to the conditions discussed in the preceding pages, clearly shows that the secret of keeping horses healthy lies in *prevention*. This is comprised in cleanliness, ventilation, care and attention to the quality, quantity, and regularity of feeding, and due proportion of work.

In all horse establishments the system of feeding, to be successful, should be regulated by definite rules, having special reference to the kind and quantity of work to be performed.

The hours also of feeding should be strictly adhered to. The latter is highly necessary on account of the small size of the horse's stomach and rapidity of digestion. Upon this account horses should not as a rule be fed fewer than four times a day. With horses out during unexpected times this cannot always be accomplished; but with town, farm, cab, and omnibus horses, it may be greatly overcome by the use of the nose-bag.

When work is light and calls for little exertion of muscular power, horses may be fed economically upon oats, with Indian corn, chaff, and bran. Every 12 pounds of oats being mixed with 4 pounds of corn, 2 pounds of bran, and 14 or 16 pounds of hay, or hay and straw chaff. These quantities, which are allowed each day, will do for a horse of 15 or 16 hands, but larger horses will require a few pounds more.

When work begins to be excessive, it must be the care of horse-keepers and those in charge to furnish a food containing greater nutrition.

I am aware that breeding will in a measure account for "pluck" and disposition to work in animals as well as in man, but it will not stand in the place of *ability* under any circumstances. The willingness or pluck may be always present, but ability will depend upon a condition of strength.

One thorough-bred horse will resemble another very much in disposition, but differ widely in ability from mode of living

Take the first from the green pasture and run him alongside that brought direct from hard dry corn and sound hay, upon which he has subsisted months, and performed daily exertion. The effect is easily perceived ; weight or distance is scarcely an object to him, but the first is blown or lamed at once.

Harness horses, and horses used in draught, require similar treatment to produce strength and endurance.

While pluck is derived from breeding, strength is derived from food and a healthy digestion. Corn and hay, transmuted within the penetralia of the living organism, becomes muscle, and, likewise, by the operation of laws within the animal organism, if we need strength (force), it must first be supplied in the shape of sound, dry provender.

There is a very erroneous idea, at least to my perception, entertained by many, that where a draught horse is required for moving extreme weights he should be large and ponderous. If the dealer is enquired of, "You want weight," says he. If a friend be appealed to, a similar recommendation is given. It is in this way many useless, heavy-legged, unsightly, lugubrious, and slovenly animals are tolerated. What these are supposed to gain by superior capabilities in moving weights, they lose in speed, and hence are seen creeping along the streets, and, as occurs in some towns, creating quite an obstruction to general traffic.

It appears to me that strength is required, not absolute weight, but a good development of muscle.

The provender used for horses consists of oats, hay, straw, and bran. Besides, fashion, and a view to economy, has led the way towards introducing additional substances, as

Indian corn or maize, linseed, and with the season, grass, clover, rye-grass, and carrots, usually called *vegetable food*.

Oats form the principle article of diet for horses in almost all parts. Good oats yield about 14 per cent. of nutrition. They are as a rule very digestable, and when clean, dry, sweet, and sound, answer very well for all horses doing light work.

The proportion required for different animals varies in accordance with the work ; but size of animal also calls for modification in the daily allowance. Horses from 15 to 16 hands in light work or exercise only, will do very well upon 8 or 10 pounds per day, which may be increased to 12 pounds under greater work. Cart-horses will require 12 to 16 or 18 pounds, and wagon-horses of large build as much as 20 to 25 pounds.

A small quantity of cut straw, or hay and bran, is advantageously given with oats in the manger or nose-bag. Mastication is much more perfect and digestion facilitated thereby. This equally applies to all kinds of corn.

It is not necessary always to bruise oats.—If the horse is endowed with his proper masticatory powers, no human invention or appliance will supersede them. It is more natural for the horse to masticate his food than to receive it in a partially cooked or digested state.

Hay and straw with bran, are articles used entirely for the purpose of giving bulk to the forms of food which occur in grain, etc., and also on account of their mechanical action on the coats of the digestive organs. By their use the food is more perfectly masticated and digested, and healthy action maintained with greater persistence and regularity.

Hay very frequently proves no better or more economical than oat straw; much depends upon the mode in which it is gathered. If allowed to stand until the seeds are ripe, greater part is shed upon the ground; and as they then contain all the nutrition, that which remains is not worth the money usually paid for it. Nutrition exists in good upland hay to the extent of 12 or 13 per cent., but in other varieties not more than 6 or 8 per cent. is to be found.

The quantity allowed to each horse is from 12 to 24 pounds. Greater economy is to be maintained by cutting up the hay and mixing with it one-fourth or one-half cut oat straw. When given in the long or uncut state, much waste occurs by the animal drawing it beneath the feet and trampling upon it. In the cut state it is very closely consumed.

Straw forms an indispensable article of diet, particularly among cart-horses, and those used in cabs, omnibuses, etc. Oat straw is always to be preferred, which in times when hay is very dear or scarce, may very properly take its place. It is possessed of nutrition to the extent of 6 per cent., but this principle is not looked at primarily. Straw should always be given cut into chaff. The practice of giving unthreshed straw to working horses is a most uncertain method, and greatly prejudicial to their working qualities. The quantity of grain they receive is doubtful, and no method can be more destructive to the owner's interest when work is required. In farm stables a great amount of inconvenience takes place from the practice; it forms one of the causes of disease in the category, which is a lengthened one.

Bran contains as much nutrition as barley. It is, however, very indigestible, and in consequence furnishes none of its beneficial ingredients to the system. Bran finds favor as a laxative. For this purpose it is given with other kinds of food in order to correct any tendency towards constipation or accumulation within the intestines. Bran contains much siliceous or sandy matter, and to this is due the mechanical irritation which proves so very useful when given with the food daily. The quantity used is from 10 to 14 pounds per week.

Among horses doing heavy work and receiving a great quantity of hard corn, bran is a most useful article, being given as a mash twice a week. For this purpose two or three pounds of bran are saturated with boiling water, scarcely *half a feed* of oats is also added, together with a little linseed prepared according to details which follow. The whole is then allowed to cool, and when at the temperature of new milk given to the animal. In many well regulated town stables this forms a constant practice.

In some places the laxitive qualities of bran are believed to be useful in removing calculi or stones from the intestines, and on this account it is used very extensively. Having specially investigated this subject, we do not think it improbable that the bran itself has much to do with their formation. Where it is so largely used, containing a quantity of dust also from the floor of the mill, these effects are common.

Buyers of bran should insist upon it being free from sweepings from the floor, etc. Bran mashes are used for animals suffering under acute fever to replace corn, which

would aggravate the complaint. They produce a softened state of the excrement, and thus relieve high vascular action. Prior to the administration of *physic* they are also judiciously administered, whereby much pain and irritation as well as loss of time is avoided—a less powerful dose being required.

Bran mashes are *not* nutritive, and therefore should not be given too frequently to animals laboring under weakening ailments. In such cases they prove positively injurious, by prolonging the disease and prostrating the powers of the animal body. After their use mangers should be well washed out with a brush and hot water having soda dissolved in it, to remove the sour smell left by the fermenting portions; otherwise any food which is given afterwards will be refused by the animal and occasion waste.

Linseed contains about 24 per cent. of nutritious matter, with upwards of 60 per cent. of fatty or heat producing material. It is never used alone as an article of diet, but proves eminently serviceable given in a state of solution with other food.

Linseed is laxitive and nourishing. While its administration promotes a regular state of the digestive organs, it also proves highly assimilative, and hastens the assimilation of other articles of food. Horses which receive linseed usually look fresh and bright in the skin, in consequence of the special influence it has upon the bloodvessels and secreting organs of that part.

Horse-dealers and grooms who desire to put on a fine coat rapidly, and improve the general condition of animals coming up from the pasture in a lean and poor state, are

well aware of this property, and therefore use linseed. The laxative qualities are due to the presence of an oil, known as "linseed oil," obtained by expression from the seeds. As a constantly soft condition of the dung of horses is not a natural, but very prejudicial state, *care must be exercised* in order not to use linseed too much. By some the oil itself is used, one or two tablespoonfuls being mixed each night with the bran, chaff, and corn. Horses soon take to it, and improve visibly under its influence, but the reader must be informed that strength is not produced directly by its use; on the other hand, *fat* is laid down, and this gives the altered appearance. Indirectly, when *good food* is used at the same time, the digestion and appropriation of the nutritive portions are carried on with greater vigor, and thus the muscular system is regenerated from time to time. The form in which linseed is given to horses is that of solution, or as *tea*. In some districts it is placed in water and boiled until the capsule of each seed bursts from imbibition, and the whole becomes a thick mucilaginous fluid. All the trouble, however, may be saved, as linseed will assume this form quite as well and as rapidly in cold water as by boiling.

The proportions are about a pound of a linseed to one gallon of water. The whole is placed in a glazed earthenware vessel, covered over and allowed to stand until ready, about twelve hours being sufficient, during which it may be stirred once or twice. Half a pint of this is given to each horse with the evening feed.

Two vessels having covers should be used.—When one is charged the other is to be well steeped and cleansed and again charged, in order to come into use at the proper time.

The quantity made should not last over two or three days, as there is a great tendency towards fermentation, by which the whole becomes very offensive, and consequently useless.

Among horses receiving a great quantity of hard, dry corn each day, linseed thus treated will be found very beneficial, and promote health.

Vegetable food consists of two kinds. One, supplied in summer, is called the green crop, and consists of varieties of grass and carrots.

Great mischief occurs among all working horses by the indiscriminate use of vegetable food. Containing much water they cause the animals to perspire very freely, they also urinate profusely, the food is hurried through the body, and being weakened thereby, they are liable to take cold easily.

They are thrown out of condition, which hard corn and proper exercise only make, and the profits and peace of the owner often considerably endangered thereby.

To expect them to work upon such food is to look for an impossibility, and is entirely foreign to the horse in an artificial condition, and it will be seen at once why we claim for the horse *entire rest* while subsisting upon green food.

Turning to grass.—The more we become acquainted with the nature, habits, and requirements of the horse, the less favorable does the practice of turning to grass become. In addition to the inconveniences already enumerated, there are others which prove more embarrassing and destructive to profits. The changes of temperature, that of the outer air being much cooler than the air of the stable, are sufficient after sudden exposure to work great and mischevious results.

In addition to the comparatively innutritious nature of grass, as set against dry food, the animal is less able to withstand the cold air of nights, of rains and winds. If the reader should possess an old animal whose services are no longer required, and it is desirable that he should be allowed to spend his days in freedom, there can be no direct harm in his doing so. In a short time he will become as comfortable and satisfied with the cool air of heaven as he previously was with that of the stable. Nature will soon provide a coat suitable for all weathers, and in his paddock, with only a bare shed, visit him when you will, he comes with a freshness and grace which contrasts strangely with the states we have been considering. He has taken a fresh lease of life, and in such a condition, which resembles the natural one most closely, he may live for years.

With the working horse matters are different. The changes are too severe upon his constitution. He no sooner has become inured to the change of climate and other vicissitudes, than he is called upon to make another sacrifice of his constitution, and subject himself again to the oppressive atmosphere of his own stable.

In all fairness such an animal should not be turned loose upon pasture land. A large loose box and yard is best, in which for the sake of his health, present and future, his feet and legs, lungs and digestive organs, he can exercise himself proportionally with the food he gets, rest and be thankful, preserved from cold winds, rain, or the burning sun. Here his green food is to be brought along with water, and a feed of corn in most instances, and with a *dry bed* beneath him, a few weeks may be spent. He thus requires

less time to be got again into condition, maintains it better afterwards, and gives greater satisfaction in the end.

Errors to be avoided.—Food should always possess an amount of bulk. Nature has not been unmindful of this when providing the nutritious principles of grain. The grain, or kernel, contains the nutrition in a concentrated form, and bulky material is to be found in the husk or stem.

Proportionate bulk is requisite to ensure digestion. The stomach cannot abstract nutrition from small quantities of concentrated food with benefit. The digestion and solution is not efficiently performed, as the stomach lacks the stimulus of contact, so essential to healthy action and secretion.

Grass, straw, and hay contain but little nutrition, and to ensure its abstraction, bulk is given to it consisting of water ligneous matter (woody fibre), and salts.

Fluids, however nutritious, as a rule, are not so easily appropriated as solid food. No better evidence is found than where cooked food is served to horses. The soft watery mass is too rapidly swallowed, and becomes as unnatural as it is innutritious.

It is an acknowledged fact that no process of cooking or preparation will render the food more nutritious, and there is positive proof that a mixture of substances, boiled to a pulp, are not so digestible as when given in a natural condition to working horses.

Cooked food for horses is a form which certainly has no analogy in nature. It is open to grave objections. It weakens the digestive organs. It is swallowed rapidly,

and the stomach becomes greatly distended, by which secretions are prevented or altogether stopped. Little or no insalivation takes place, and the food does not undergo those important and preliminary changes which have already been insisted upon. Secretions, otherwise necessary, are of no use with such an excess of fluid food, and if poured out are too far diluted. The stomach acquires in time an immense capacity and the muscular powers are weakened. The liver becomes diseased, and the natural secretions very limited or absent. The intestines now suffer from this combination of results, and colic becomes of periodical occurrence.

The bulk given to boiled food is looked upon by some as an advantage, and in illustration of the belief, a gentleman remarked recently that the food thus supplied to his horses must be more nutritious than other kinds, as it is softer, partially digested to begin with, and every twelve pounds put into the copper are increased to forty-eight. It must, however, be remembered that *thirty six pounds of this is only water*. I would like to know who can conscientiously expect a horse to work well and continue in health on food which contains three hundred parts of water for every hundred of spoiled grain.

The stomach and intestines of the horse are not intended for sloppy food. The whole arrangement forms an assemblage of perfect organs eminently fitted for bruising, insalivating, digesting, and appropriating *natural* food, and unnatural slops and trash concocted by the device of man is attended with disease and mortality. *It therefore proves an*

expensive mode of feeding, and a knowledge of this is of great value to all concerned in the keeping of animals.

Feeding after work, when the exertion has been very severe and prolonged, is a matter requiring great care. Among racehorses nothing can be more marked than the attention paid to them when they return to the stable.

It must be apparent to all who give the subject any consideration, that after a sharp race, or the drawing of heavy loads, much wear and tear of the whole system takes place. It is not merely the muscles which move the limbs, but the muscles also which regulate circulation of the blood and digestion of the food. In a word, all are *tired* and need *rest*. When the racer arrives at his stable, so well are those in charge aware practically of this fact, that they avoid torturing the stomach by causing it to perform unnecessary labor. The mouth is washed out, the face, nostrils, and eyes carefully sponged with cold water, which refreshes the creature almost beyond estimate, and when that is done he receives a quantity of *warm oatmeal gruel* which has been prepared during the afternoon. After taking off the rough dirt, washing the legs, etc., he is left for a time. On the return of the groom, he is cleaned in right earnest and supplied with corn and hay.

What is the rule in other stables? In many the horse is first allowed to satiate an excessive thirst with cold water at a trough in all seasons, his feet and legs washed very roughly, and half his body wetted at the same time. He next is allowed to go to his stall, and during the time he starves with the washing he is allowed to fill his tired stomach with a large quantity of food, while a man teases

him under the pretence of cleaning. Surely these animals, which are directly concerned in the building up of our colossal fortunes, are worthy of a little more consideration. If the labor in which they are daily engaged is not productive of amusement, it is certainly a source of profit without which amusement could not be afforded. We appeal therefore for a little more consideration for our four-footed friend the cart-horse and his allies, who in their spheres are equally as useful as any other animal, certainly an indispensable agent in our social economy.

Instead of cold water supplied in hurtful quantities, let us suggest *hay tea*, or a little tepid water with oat or barley meal thrown in. These would be far more agreeable to a thirsty horse, and refresh and cheer instead of paralysing the stomach. Hay tea is made by pouring boiling water upon a handful of *good* hay placed at the bottom of a pail, and covered with a cloth or sack. After a time cold water is added to fill the pail, when it is given to the animal at the temperature of new milk.

In place of heavy food, we recommend for a tired horse a few oats or a little barley which has been steeped in hot water for a few hours. This is mixed with a handful of bran, and given on arrival in the stable after the hay tea, or meal and water. The cleaning operations over, and beds put down, the rest of the food may be given and stable closed for the night. By this method the animals are recruited and food proves useful, but in the unnatural systems so often carried out, it causes their destruction in not a few instances.

It will be found more economical in the way of food to use old horses, in preference to young ones. The horse is not properly set and framed until he is eight years of age. He, therefore, before that age requires support, not only for his daily wear and tear, but also for his growth. Neither do all horses require, as is too generally supposed, feeding alike. One description, or make, of horse would almost fatten where another would starve. A small horse does not require so much food as a larger one, though it is often a subject of surprise that one horse is not so fat as another.

A working horse should never have less than one peck of oats, a day, but more according to size and circumstances. Some horses, if in poor condition, will eat a peck and a half of oats per day, with benefit to them. In feeding them well there is this advantage, they eat the less hay, consequently they have soon finished their supper and get to rest; while the next morning they are in better courage and all the fitter for their work. Never be induced to stint a horse of his corn on account of any violence or fretfulness of his temper; give him his full quantity, and it will be found to act upon him as a sedative; and as he gains fat, he will become proportionably quiet and self-satisfied. But on the dull horse food has a contrary effect. Let it not be imagined, however, that these effects are produced by one or two days feeding. Such desirable changes can be wrought only by a continuance of good management for some time. Neither let it be supposed that a poor horse will not get fat. Feed him well, indulge him by walking up hill, and always pulling up to a walk when he begins to get warm on the neck, and in six weeks he will not appear like the same animal.

The same remark applies to the fretful horse, with this difference, that it is necessary to exercise more patience to get him to walk at first, and to abstain from applying to him the whip on any occasion, until he feels himself comfortable, which also may be in about six weeks. To tell a practised horseman not to use the whip to a fretful horse, would be a needless caution, but to others, particularly beginners, it is not so ; as there are many who would almost as soon be without a horse at all, as be restricted to using the whip only as often as necessary.

MASHES.

These are admirable for horses at all periods of the year, but then they should not be given in the parsimonious way they usually are, doing neither good nor harm. For what purpose are they intended? Why, just to open the bowels and gently cool the body ; so as to preclude the necessity of having recourse to more violent medicines, the application of which would deprive the owner of the horse for some days of its services. Such would be the substance of the answer given to the above question. There are, however, other and perhaps better reasons to be assigned in favor of the application of mashes—they are important as preventing inflammation in the feet. Nature intended the horse to feed on succulent food, and stand or move on the cool ground. It may be observed that when left to himself he retires during the heat of the day into the shade ; preferring the time to feed when the ground is cold and wet with dew, and he takes his exercise at his pleasure. But for the use

of man, he is taken from the open fields into the close stable, his feet are placed upon warm litter, and he is fed upon hot inflammatory food. This is reversing the design of nature, but is necessary to enable the horse to perform the work to which he is destined. Yet if we reflect, that he is taken out of the stable, and forced to go at a considerable pace, not for any length of time agreeable to himself, but so long as it may suit our pleasure or business, is it not astonishing that so much violence done to nature is not resented more fearfully than it is? But the present artificial modes of treating the horse are not altogether unproductive of such consequences as might be anticipated. Fevers, though perhaps slight, will ensue, and settle in the most vulnerable or most exercised parts of the animal's frame—principally in the fore feet. The best means of preventing, or counteracting, this ill effect, is by giving the horse a bran mash mixed with *cold water*; nor, because a change is made for the bran, let that be any excuse for abridging his proper allowance of corn. The better plan is to mix the bran and corn together making of the whole a thick wash, and not as usual damp the bran only. Attention to this recommendation will improve the horse, without injuring his appetite, as *warm mashes* are apt to do. The bran mash may be given twice a week with great benefit to the animal.

GRUELING.

This is a mess rarely required by the roadster, although some who would wish to appear more knowing than their fellows, give it to their horses without the least occasion.

They have probably heard that it is sometimes given to trotters while performing a match, and they conclude that what may be good for one time must be good at another, by the same rule, that what is sauce for the goose is sauce for the gander. But it is not so in the present case. The reason for giving trotters gruel after very hard runs is the great prostration of their strength at the time. Their extreme exhaustion renders it necessary to supply them with nutriment in a condensed form to enable them to swallow it, and being thirsty from the fever about them, this is the most convenient mode of administering a restorative. The horse in this case is exactly in the situation of one just getting convalescent after severe sickness, but too weak to eat his customary food until he has been strengthened by tonics. Is it not then absurd to treat a horse in perfect health, nor exhausted by extreme fatigue, in a similar manner,—that is, to *coddle* him, for so such treatment under such circumstances is properly called? He will eat well enough if he has plenty of water to drink. But if he should be very warm, and loth to eat, give him a reasonable quantity, say six quarts, of *chilled water*, and then try whether he will eat some corn well *wetted*.

Persons who resort to this messing or *codling* have, of course, a pretext for it, which pretext usually is that they have driven too hard. When this is really the fact, the better way is to give the horse an extra allowance of corn: he will eat it. If horses are properly used, and yet are off their feed, it is not for want of gruel, and the sooner a veterinary surgeon is called in the better. The trotter has gruel given to him during his performance, because there is no

time to feed him otherwise, or to prevent him being overcome by excessive fatigue. He is given gruel on the same principle as a man in over-taxing his physical powers for a wager would need brandy as a stimulus. The reader may rest assured, and we repeat it, that the roadster is rarely in want of gruel.

Boiled oats given to horses is only another mode of gruel-ling, and, therefore, comes under the same strictures. No one can deny that gruel and boiled oats are both easier of digestion than raw food, and, therefore, are only suitable for weakened and disordered stomachs. Then why give messes when the appetite is good, and capable of digesting the best food? The race horse never has gruel but in case of sickness. To bring him in proper condition to the post, the most solid food is necessary.

WATER.

More error prevails respecting the quantity of water, and the proper times of giving it to horses, than perhaps on any other part of our subject. Nature never errs, yet are ostlers determined to act in direct hostility to her dictates. One quantity of water, and one only, is almost invariably doled out, without the least reference to the actual state or wants of the animal. No matter what he may really require, what exercise he may have undergone, or how far the animal fluids may have been expended, they have but one rule under all circumstances. By a sort of reasoning peculiar to themselves, they have been brought to believe that the faster a horse has been driven, and the greater the distance, so, in proportion, he ought to be stinted of this indispensable

element—water. Nor does the length of time which the horse may have been deprived of liquid sustenance at all enter into the calculation. If the animal may chance to have gone without his usual supply at the regular hour, the ostler will never allow him to make up for his involuntary abstinence. It might be thought that gentlemen not themselves averse to some refreshing beverage, would bestow more thought in this respect upon their four-footed companions ; but whether they are conscious, from experience, that over-drinking is injurious to the health and constitution, or from a rooted aversion to pure water passing down their own throats, and so apply the same reasoning to their poor beasts, is a question hardly worth the enquiry. One thing, however, they should not forget, viz., that quadrupeds have not the same incitements, or inclination, to go to excess, as bipeds have. The former only drink as nature requires, the latter yield to the temptation, both from desire and habit on every frivolous pretence. The horse requires water for the following purposes : to quench his thirst ; to assist digestion ; to dilute the blood and fluids, and to promote the natural secretions. By depriving him, therefore, of a sufficient quantity of this vital article, we are impeding the necessary operations of nature ; and this is the secret cause of much of the unsoundness in horses. For as we have already said in a former part, nature will not permit her laws to be seriously violated, without exhibiting some resentment. A slow fever is one consequence of this painful deprivation, and which settles in the feet or eyes, but most commonly the feet, for reasons before assigned. May not glanders also be traced to the same cause ? For slow fever not be-

ing allowed to subside for want of water, leads to inflammation of the mucous lining of the nose. At all events, no more satisfactory reason has yet been given for the origin of this disease. But without these after consequences, is it not singular that men should persist in inflicting so barbarous a punishment upon animals incapable of expressing their wants? To be ever thirsty, yet never permitted to quench that thirst is the height of cruelty. Nabobs of the East have asserted that one of the greatest luxuries in that climate consists in being ever drinking, ever dry. Let them turn ostlers. In this country, stablemen seem to enjoy that luxury in a superlative degree. To quit, however, this little digression, how comparatively happy is the poor horse, not employed upon the road, but in some other perhaps severer daily toil, yet, when let loose, may unrestrained slake his thirst by a refreshing draught at the first pond or trough he may reach!

Horses feeding upon grass, and without performing any work, always slake their thirst at a pond three times a day; and on each occasion drink not less than one pail each. This too, be it remembered, is when they are living upon succulent food. By a parity of reasoning, it must be obvious that they would require more water upon dry food. Why then give them *less*? Stablemen water their horses three times a day, morning, noon, and night, or according to their whim or laziness. A pail is allowed for each, but these buckets vary in size, containing from four to eight quarts; yet a pail is a pail, and whether it be larger or smaller, to that quantity is the animal restricted each time. These men may well be called hydrophobiacs.

To move unusually fast, with a great quantity of water in the horse's stomach, is bad. But give him as much as he will drink, yet he will not be overcharged with the fluid. The plan adopted in racing stables is to give the horses water so frequently that they will drink no more than six quarts at a time ; but what would be still better, where practicable, would be to keep a pail of water standing by the horse, so that he might drink whenever he chose. A horse not put to the extent of his speed, can never be inconvenienced by being allowed the same quantity of water as the racer. Neither need any apprehension be entertained of impairing the condition of a roadster for work, when it is remembered that the racer is required to be in harder and firmer, therefore better, condition, than any to which it is possible to bring the former.

Inkeepers often stint the horses of their food, upon the pretext that they cannot eat so much when they are thirsty and feverish, as they would if they were perfectly cool and tranquil. These stable-people know that the owners of horses are mostly satisfied, if they see hay placed before their steeds uneaten ; but not only will horses, if duly supplied with water, consume the small quantity of hay allowed them, but also a good proportion of their bedding. Some persons may object to giving their horses an unlimited quantity of water, from a notion that it may cause too much purging. This idea, however, is not founded in reason, because when the horse is abridged of his due allowance of corn, he is apt to drink too eagerly and too largely, if he have the opportunity, and there be no check imposed upon him ; but if he be brought to a full allowance by degrees,

water will have no injurious effect upon the bowels. Begin, by giving him as much as he likes on a Saturday night; then tie a pailful in the corner all Sunday, until you start again on Monday morning (this is under the supposition of your horse being constantly in use,) and always after giving him water, to observe the directions already recommended. The advantages derived therefrom will be soon experienced. Heed not the opposition of ostlers and others, but look yourself to your orders being properly obeyed. You will then be amply compensated for your trouble, by your horse being better able to go through with his work, and by his lasting longer than he could possibly do under the starving system. The principal theories entertained by thousands upon this question are pure absurdities. Nature is not guilty of creating false appetites, when animals are in a state of health; yet is she frequently accused by the ignorant of this preposterous error.

It would be superfluous to show the various ways in which dirty water must be injurious to the animal's health; but there is one absurdity so glaring, and which is so clearly illustrative of the bad consequences arising from stinting the horse of this indispensible beverage, that it must suffice without going more into detail. Why is nitre given in the horse's water? "Because," you reply, "I observe my horse to be feverish, and I, therefore, give him the nitre to prevent his drinking too much, and for the purpose of removing the fever."

Does not the increased thirst of the horse indicate as plainly as nature possibly can the cure of fever? Give the animal as much water as he will drink, when he has fever

upon him: it is better than nitre; the fluids will become thinner and the end desired answered. But, will it act upon the bowels, and purge the horse? Yes, and upon the kidneys also; and will most likely carry away all traces of fever. Good, but purging weakens the horse. This is a mistake. While there is fever the horse must be weak; remove the fever and he becomes again strong; or, to be more explicit, any deviation in the pulse from the natural standard must cause weakness; restore the pulse to the natural standard, and the horse, or the man, no matter which, will become well. The water, therefore, in the sense in which we are speaking, acts particularly as a tonic, recovering the strength of the horse, by reducing his pulse to their proper state. Water, regarded in any respect, is a tonic. Let a bountifnl supply of it consequently not be deemed adverse to the health or constitution of the horse. It completely drives away fever, not allowing this insidious disease to work about the frame until it permanently settles in the feet or attacks the lungs. Neither with a due supply of water need a horse be sent to grass to prevent his becoming *groggy*. Give him plenty of this element, and not over-drive him, with ordinary care in other respects, and he will be almost certain to preserve his feet and body cool, his coat good, and his eyes perfect; in short, he will be sound and healthy.

CHAPTER XI.

Stable Management.

THE secrets of success in profitable stable management are *punctuality* and *regularity*. These contribute towards the *system* which is so particularly required. Without them, it is an utter impossibility for proper attention to be directed to all the details which call for notice, while nothing will operate as prejudicially upon the health of animals.

Early operations in the Stable consist in first making a general examination of each animal, particularly those which have been tied up by halters or chains in stalls.

This is useful in order to detect injuries from being cast or loss of shoes during the night, and to detect signs of disorder or illness, which if present are best reported *early*, on the principle that “a stitch in time saves nine.”

A careful inspection having been made, the animals are watered and fed, and while they are consuming their food the bedding should be turned up, and stalls and other parts carefully swept out. Any time remaining may be devoted to the examination of harness, in order to secure the cleanliness of pads, etc., observe defects, and have them remedied

if possible. As soon as the food is consumed, the operation of cleaning is to be carried on in good earnest, which done, harness and prepare for daily work.

Each horse as he comes from work is carefully examined, also the harness, and if nothing calls for other treatment, the animal is led to his stall, watered and fed, dressed down, bedded and left for the night. The groom has also to see to their being safely tied up, all lights put securely out, and report any irregularities, lameness, disease, etc., which he may observe.

In racing stables modifications exist, and, to the credit of those at head quarters, we are able to establish the principles by which punctuality and regularity may be caused to work so much good. Many ailments of the farm or cart horse are unknown in racing stables. And why? Simply from the fact that animals there are fed, worked, or exercised with the clock. If these principles pervaded the minds of those who keep and work, or drive carriage, cart, and cab horses, there would be less of those serious consequences which so often arise and mar the prospects. A young man in the racing stable, goes through a kind of apprenticeship, by which he becomes *au fait* at his duties, and habits of regularity are enforced. If coachmen and grooms in general had such training always, we should find that stable management in our towns and villages would be a question upon which there would be but little to condemn. In no other horse establishments is there such wanton waste and carelessness, or where the results are more inconvenient and harassing.

In racing stables the morning hour is from five to six o'clock. The horses are to be fed and watered, bedding turned up and stables swept. Those animals going to work are next thoroughly dressed, and afterwards receive a small feed of corn if their work is likely to be hard and time will permit. Others merely going for exercise are wiped over and taken out for the prescribed time, and on their return receive a little hay, are clothed, have their feet examined and washed, and by this time is the hour for breakfast.

The grooms on their return to the stable dress over their horses thoroughly, clothe, put the stable neat after sweeping out all manure, throw down a light clean layer of straw, rack up, and leave for outside duties. At noon, corn, hay, and water are given to resting horses. Other animals coming from work are fed and dressed on arrival.

At four o'clock it is the custom in some stables to feed again with corn; the plan in the main is very good. At dusk each horse has his clothing removed, is carefully wiped down, and reclothed. Clean or dry straw is thrown down for bedding, the stable utensils carefully put away, and water, corn, and hay supplied. Collar chains, head collars, and halters should be carefully examined, in order to test their security for horses tied up with them.

Boys should be cautioned against leaving pails in stalls or boxes, unless specially ordered.

Among cart horses, cab horses, etc., which remain an uncertain length of time from the stable, *the nose-bag* is of great service. It has, however, defects, one of the most important being detrimental to respiration. The material of which it is usually made is strong and of too close tex-

ture; a coarser and pervious material would be an advantage, and avoid the necessity of breathing over and over again the same air, by admitting a current through the meshes.

Cleanliness.—Too much cannot be written or urged upon this point. Many disorders and ailments can be traced to a neglect of it. Holes and corners which cannot be got at regularly should not be permitted in a stable.

It must be borne in mind that the food, dung, urine, straw, etc., in stables are all capable of generating unwholesome gases, by their proneness to putrefaction when lying about.

These materially interfere with the circulation of pure air, and in consequence the health of horses and men suffers. In order to have them removed, the bedding should always be taken from the stall, and in fine weather spread outside if possible. The dirty portions are to be separated, the whole of the floor and drains thoroughly swept out, and every portion of the refuse carefully removed to a manure heap at a distance from the stable.

Mangers should always be well cleansed—especially wooden ones—after the use of mashes or soft food of any kind. Woodwork of all kinds, and even harness and clothing, require cleansing after the existence of contagious skin or other diseases. For this purpose a solution of black or pearl ashes may be used, the strength however being varied for the several purposes.

For harness, clothing, and *painted* woodwork, two or three ounces to a pail of hot water will be sufficient. But to *bare* woodwork the strength may be quadrupled.

Besides this it is sometimes necessary to use *disinfectants* of a special character.

For the floors, crude carbolic acid in solution may be sprinkled over the surface, and the whole afterwards well scrubbed with hot water having black ashes in solution.

A solution of crude carbolic acid is also eminently serviceable for the mangers when contagion is feared. The proportions are about one pound to a gallon of water in which soft soap has been dissolved, with the use of large quantities of pure water afterwards.

When contagious diseases are known to arise in a stable, remove the diseased animal at once. Carry with him all harness, clothing, stable utensils, etc., which have been used for his purposes; do not use anything belonging to him for another; and those in attendance upon him should not go into the stable where healthy animals are confined.

Lastly, carry out all injunctions which may be given by the veterinary surgeon in attendance. He has many strong reasons for enforcing regulations which may not be understood by others. Upon these his success depends. Grooms should therefore strictly act in concert with him, and faithfully carry out his desires.

Lighting of Stables.—One of the greatest causes of a want of cleanliness is the absence of light in stables. It also gives rise to other inconveniences.

When stables are badly lighted, or have no windows, dirt accumulates, foul gases are formed, and the animal's health suffers in consequence. In dark stables the men cannot see to clean the floors properly, the air becomes impure, and ventilation interfered with. During the night when the doors are closed, the animals are nearly stifled, they become too hot and easily take cold. They also suffer

from diseases of the eyes and lungs, and in the end not uncommonly die, or require to be destroyed on account of glanders. In the morning, when the doors are opened for carrying on the operations of the stable, the air is penetrating and suffocating, and while these go on, draughts of cold air in winter produce baneful effects.

Wherever such stables exist they should be altered, large windows and ventilators put in to admit nature's great purifiers, *light and air*.

Temperature of the Stable.—This is of great importance to the horse proprietor. Heated stables usually indicate deficient ventilation, but the two must not be confounded.

The temperature of a stable will materially effect all new comers. Horses that have been out at grass, should never be brought into stables where others are confined. The only safe practice is to put them first into a shed or hovel, and gradually introduce them to work and the stable at the same time. It has been truly observed, that under neglect of these precautions the animal is likely to suffer far more than by being exposed to the contrary changes.

In all cases regulate the temperature of the stable by allowing foul air to escape effectually, without establishing currents over the animals. In summer the temperature may be considerably elevated above 60° , but nevertheless the atmosphere may be rendered quite as pure as can be expected, and to reduce that temperature would be impossible.

The object of maintaining a cool state of the temperature in buildings, is to promote healthy respiration, purification of the blood, and ventilation.

Grooming or Dressing.—With regard to implements for this purpose but little need be said. They are well known to most persons. It is to their *proper* use that our remarks will apply in greatest force.

The *curry-comb* is intended for use when the coat is *clapped* to the skin and glued, as it were, by the products of perspiration. It may be used also to the dirty legs of cart-horses when dry, or to the bodies when the old coat is to be gradually removed. But grooms should be warned against using it with too much roughness, as the animal is irritated, and temper not uncommonly spoiled, while injuries are sometimes inflicted.

The *main use of the curry-comb* is to *clean the brush*; which, used by the right or left hand, according to circumstances is to be plied with vigor.

The *body brush* is oval in outline and provided with a strap across the middle, through which the working hand is put. A great fault in many of these brushes consist in the bristles being too weak and too close. They thus fail to reach the skin.

The *dandy*, or *whalebone brush*, is a most useful agent in removing loose and rough dirt from the body and legs, mane and tail, and should deservedly find a place in more stables than it does.

The *wisp* is made of straw, and also of soft hay, the former is to be used for rough purposes, while the latter is damped and used at a later stage.

The *rubber* consists of linen or flannel, usually the former, made up like a towel, having a loop that it may hang up when done with. Many grooms use also two chamois skins,

or wash leathers—the one for wet, the other for dry purposes.

Foot pickers are required to remove imprisoned stones or other objects from the feet after journeys, and *water brushes* for washing them.

After this enumeration of stable tools, and the groom is provided with a requisite number, the rest depends upon himself. The appearance of a horse always reflects the character of the groom; no better test need be resorted to.

A certain gentlemen, well known for his superior stable management, when asked by the writer how many grooms he kept, replied, "Three helpers and one groom; that groom is myself. I look on and *have* the things done in proper order. That is the reason you are able to admire the clean and tidy state of the place and animals."

Good grooming removes dirt, and the products of perspiration from the skin, which if allowed to remain obstructs natural and healthy functions and endangers health. The proof that horses are well groomed, is shown by the clean shining skin and absence of dirt on the finger when it is passed over the hair. The operation **not only** removes dirt, but causes a quickened circulation of blood in the skin. This helps to remove by perspiration useless parts from the body, and gives further nutrition to the skin and hair, hence the improved appearance, better health, and consumption of a less amount of food than in other horses.

Dressing is usually carried on in successive stages.

First, the curry-comb is carefully used to all parts when the hair is matted and glued down, *the direction being in that of the hair itself.*

Second, usually the straw wisp or dandy brush to the whole of the body.

Third, the body brush in one hand and the curry-comb held in the opposite, to remove dirt from the bristles. The brush also goes over the whole of the animal in a thorough manner.

Fourth, the damp hay-wisp also, applied with a will.

Fifth, the dandy brush to main and tail, and

Lastly, the rubber, to use the whole of which occupies fully one hour.

The operation of dressing horses should always be set about as soon as possible after entering the stable in the morning, excepting of course while horses are eating their provender and when required to go out to exercise.

A good daily grooming is absolutely necessary, independent of that which is required after coming from work. Those animals which have not been out of the stable since exercise need only their clothing removed, dressed with the cloth rubber, and reclothed.

The operation should if possible be always conducted in an outhouse or shed for the purpose. Grooming in stables is prejudicial, and should be avoided on the score of health.

Washing the Legs.—The use of water in washing horses' legs is often very much abused. Without care nothing produces more inconvenience.

In many places the blessings of pure water have been extolled and received as a cure almost for everything, and, acting upon the belief, the converts imagine that they "cannot have too much of a good thing." Results are, however, against the supposition. The evil consequences are, crack-

ed heels, swelled legs, grease, etc., all of which may be avoided in ninety-five cases out of a hundred

In many stables visited by the writer, the horses when returning from work, cold, tired, and hungry, are compelled to stand some minutes while each leg, almost to the middle of the body, in very dirty weather, is drenched with water from a hose. From this cause a man is almost constantly kept to dress the legs, which are unusually affected. In one establishment, from out of nearly one hundred and twenty horses, one-third had to be thrown off work in consequence of internal disease arising. Carriage horses and hacks suffer much from cracked heels, while their breed defends them frequently from grease. All this comes from the treatment to which they are subjected afterwards.

To the mere washing of the horses' legs, if conducted properly, none can offer objection. In wet dirty weather, when the hair is matted with mud, no animal can rest comfortably with such an accumulation about them. If allowed to remain, the sand and grit is moved during exercise to the wrinkles of the skin about the joints and the parts are chafed, soon becoming raw, and presenting obstinate sores. By all means let the filth be removed as quickly as possible, using in summer cold, and in winter warm water. A good brush with a *small* quantity of soap will also be required.

Next press out the superfluous water and briskly rub with coarse towels kept for the purpose, and put *loosely* a bandage upon each leg as high as the parts that have been washed, which should scarcely ever be above the knees or hocks. This process will very certainly limit the number of cases of cracked heels, grease, etc., all of which occur from the

amount of cooling to which these parts are exposed when wet. If any person wishes to test the truth of this statement, let him go out of doors with his head and hair fresh from beneath a stream of water. The experiment may be repeated from day to day, but like the horses' it will be found he will never become so *hard* as to be able to defy the consequences.

We frequently hear in stables the directions given "to be sure and rub the legs dry." Whoever gives such instructions, cannot be aware of the impossibility almost which they require, unless men and horses are entirely deprived of rest. The easiest and most economical method is decidedly the use of flannel or linen bandages. For cart-horses a coarse kind of material is obtained, low in price and exceedingly strong, commonly used to make wrappers for linen goods.

Bandages are usually required about four yards long, and three to five inches wide. At one end the corners are turned in and stitched down, and upon the narrow part is also stitched a piece of tape doubled, so as to allow the use of the free ends for tying.

The usual plan is to take a piece of flannel or other material of the requisite length, and tear it up into ribbons of the proper width. For large cart-horses they will be required at least five yards long and five or six inches wide. By their use the legs dry rapidly through the means of *natural heat*, and in this way the groom will generally be enabled to remove them, and rub down the legs before leaving for the night.

Clothing.—The object of clothing horses is to compensate for the loss of temperature from the body which naturally takes place in cold weather. For this purpose woollen blankets are employed, which are kept on the body by means of a roller. Hoods and breast clothes are also used with additional clothing as the weather demands, but in this sometimes error occurs. Too much clothing renders the animal sensitive, by keeping up great action in the skin, while health is prejudiced thereby. In most instances, proper exercise, pure air, and *moderate* clothing will be found most conducive to health.

Bedding.—The material used for bedding horses varies according to the locality. That most generally used is the straw of wheat, selected principally on account of its brittleness, which prevents the animal getting his feet entangled and injury occurring.

Oat straw is usually considered objectionable on account of its toughness. Barley straw is too dusty, and causes great irritation of the skin.

In wheat straw there is an advantage in the fact that beds made of it are cleanly and comfortable.

The service and economy in each of these substances vary in accordance with the condition in which they are used, as well as supply. That none, however, are equal to a straw bed few will deny.

It is important to allow horses good beds. They are prevented from doing damage to their limbs or skin, and, besides, rest much better, and thus is preserved greatly their usefulness.

Manure heaps should be removed as far as possible from buildings, as the putrefaction which usually goes on, resulting in hurtful emanations or disagreeable smells, contaminates the air of all places where animal life exists, and renders it unfit to support it for any length of time in a healthy manner.

When tanks or places for manure are made, care is to be observed that they are not located near wells from which water is drawn for drinking. If space will not admit of this being carried out, the receptacle should be lined with bricks and cement, to prevent the fluid portions from percolating the soil, running along drains, and then finding their way to drinking water.

Clipping and Singeing.—These are to be viewed as necessary evils attendant upon the keeping of horses. There are arguments to be adduced, strong in their tendency towards truth, and bid fair to destroy the validity of the grounds upon which the practices are based. There are, however others which are equally strong in their justification and continuance.

Both these operations bring about the same result—viz., reducing the length of the coat or hairs over the whole body.

Clipping is performed by a scissors and a comb, and recently by a newly-invented machine which bids fair to answer well the purpose.

Singeing consists of burning off the hair by means of a lamp charged with naphtha, spirits of wine, or, what is better, coal gas.

The merits of each operation are considered to be widely different. While by the use of the new clipping machine

a horse can be deprived of his coat in a most incredibly short space of time, simple division of the hair is thought to favor exudation or evaporation of the fluid nutritive portions which occupy the interior. The advocates of singeing claim an advantage by their process in which the end of each hair tube is *sealed* up by the insoluble portion left upon the end,

Both these opinions are worthy of being remembered; but nevertheless it may be safely argued the disadvantages resulting from the operation of clipping are certainly not covered by that of singeing.

It must be evident to all who give consideration to the subject that singeing has much greater disadvantages than even clipping under the more protracted mode by scissors and comb. We need only mention that the flame alone is sufficient to render many horses very tedious and troublesome. Some will not permit it to approach them, while others stand trembling, and a sudden fit of perspiration at once proclaims this impossible.

In singeing also, the skin is not unfrequently burned, eyes are damaged, man and tail disfigured. And lastly, it is a dirty and tedious operation. It answers well for taking off the thin hairs which continually shoot up during the winter; but for effectually and expeditiously removing the coat, the machine, when in proper order and efficiently worked, is decidedly to be preferred.

CHAPTER XII.

General Arrangement of Stables.

ERY little variation exists in the plan of arrangement in stables. Out of many hundreds of such buildings, as well as cowhouses, that I have visited, not more than a few attempts are made to depart from the one common principle of tying up to the wall, or manger which projects from it. The prevalence of the system surely indicates a very slow march in the way of improvement, and points out how few must be the resources where it is adopted without change.

The *tying up* of animals in numbers beneath one roof, separated by board partitions running at right angles to the wall, is a very defective system, and obstructive to the circulation of air in a proper manner, to say nothing of the great hardship which is inflicted upon the animal in being compelled to look at a blank wall continually when in the house.

In addition we usually find holes are either made or recommended to be placed over his head. Unfortunately, by making merely a hole we do not compel the foul air to go out there as we might be led to believe. Sometimes it may do so, when it cannot fail to rise upwards from the floor and carry with it the hurtful emanations of dung and urine. These pass beneath the very nose of the horse or cow, and are breathed to their detriment. On the other hand, we may expect cold air to find its way through, and falling upon the head, produce a chilly stratum which gives rise to sore throats and other affections. The writer is aware of such a stable producing great damage at times.

Imperfect arrangement induces all kinds of unsystematic and unscientific principles of cleanliness and ventilation. When cold air reverses the order of currents, straw is at once stuffed into the channel and another extreme brought about. Thus one evil stalks in the train of another, and we fail to recognize them frequently until too late.

In order to overcome the many disadvantages which occur from the present system of tying up horses and cattle to the wall, a plan has been adopted, in several instances with success, by which neatness of arrangement and appearance are in perfect keeping with other points. The stalls are placed in one or two rows, as in the old system, according to the size of the building, which should be wider than they are usually made.

Each animal has allotted to him a space equivalent to 1500 cubic feet, in which he can breathe freely. This would require a stall 6 feet wide, 9 feet long, with height above to the extent of 14 feet, 3 feet in front of manger, and 6

feet behind the stalls. The mangers are accordingly brought 3 feet clear from the wall and placed between the stall partitions. This plan thus leaves a foot-path between the wall and manger which is used for the purpose of feeding the animals.

Behind each stall the space allowed answers for passage in and out and proper cleaning operations, while animals enjoy a purer atmosphere, and the whole admits of a better principle of lighting and ventilation to be carried on.

Stable floors should be of the very best kind. When holes or other irregularities are present, dung and urine accumulate in fermenting masses and interfere with the health of the inmates.

Stable drains are a great nuisance in many instances. Drain traps are likely to prove a greater nuisance than that which they were intended originally to set aside. On account of the drain becoming plugged up below by breaking, damage, or stoppage of solid matters, all the gases which result midway find their outlet back through the trap.

To remedy this, we now recommend all stench traps to be placed *outside* the building. The drains inside are to be made very wide and shallow, having a moderate fall to carry off the water. By this arrangement there is less danger from horses slipping, and no possibility of getting feet or shoes fast in them.

Loose boxes are invaluable where horses are kept. No stable where there is more than one horse should be without them. They are far preferable to stalls under most circumstances, but are not always admissible, on account of deficiency of room.

A loose box is a great advantage to a sick horse. For that purpose it should be situate at a distance from the usual stable, as a guard against infectious or contagious diseases. It should be well lighted and ventilated by the wall below, or door, and above by the roof. The dimensions should be not less than twelve feet square, with twelve feet space in a perpendicular direction also. The floor composed of hard impervious material slightly falling to the centre, so as to cause urine, etc., to flow off by means of a very shallow and wide open drain to the outside.

The doors should *slide* along the wall on the outside if possible ; an arrangement which is more approved than their being hung upon hinges. When doors are hung upon the outside, horses have been known to draw the door towards the wall by their head, and thus nearly hang themselves. To allow of fresh air, a rail or bar door is useful. It should fit the doorway from top to bottom. Half doors are objectionable.

CHAPTER XIII.

The Causes of Disease, and its Prevention.

NIN a majority of instances disease arises from mismanagement and a want of the proper principles which insure health. Imperfect stable management is a prolific

source. Much of this has already been detailed. If we need incontrovertible proof, we have but to turn to racing stables where all is order and perfection. There disease seldom appears. If its does, in ninety-nine cases out of a hundred it is of the most intractable character, and traced to be dependent upon causes beyond control.

Among many of our farm and town studs, feeding upon inferior provender, and the use of so called "alterative" medicine, works great mischief. The common principle is to allow mismanagement to proceed for some time, and constantly drug the animals with medicines of which the groom can know but very little. The use of nitre (saltpetre) is frequently attended with baneful results. The lowering and cooling properties of this salt are such that when it is supposed that one disease is driven out, the animal is not unlikely to be affected with sore throats, coughs, and colds.

When horses are treated properly, then exists a state which we call *health*. That word means more than is usually ascribed to it, and signifies that condition which admits of *no improvement*. Of what use then are the medicines so commonly and constantly used to nauseate and interfere with the animal functions? Such things cannot be administered without producing a disturbance in the system. That disturbance is not unlike disease, and is used by the medical man to overcome, as it were, any unhealthy condition which he may be called upon to eradicate.

Into no greater mistake can owners and stablemen fall than to suppose it is consistent with reason to drug an animal in health, or that medicines given regularly prevent disease. The reverse is frequently the result. But tell such

people that disease is always, or nearly always, the result of mismanagement, neglect, or want of forethought and knowledge, they would laugh in derision. "We *do* know how to manage," say they; "give us information *how to cure*." Such was the statement of an individual a short time ago. He had boasted how he managed, of his profits, and how he kept his animals in health, but nevertheless lost greater part of his stock by *mis*-management.

It is far better to prevent than to cure.—The laws of the former are better understood than the laws of the latter, and should comprise greatly the foundation of every man's ordinary education. But how expensively and roundabout do many choose to go to work. Actually allow disease, the thief, to enter a stock—the stable, and even favor its entrance by taking off the bolts and bars, *i. e.*, lowering and devitalizing the constitution by medicines when the animal is in health. After the steed is stolen, lamentation occurs, and a lock—the veterinary surgeon—is sent for, and *expected* to restore that which is lost.

Owners and grooms would profit much more by the study of duty and management, than that of the actions and uses of medicines which is an affair of a lifetime. Let them become perfect in stable management, it will gain them far more lasting emolument than they can hope for in a scientific path which their feet are not designed by nature to tread.

THE DISEASES OF HORSES.

Before mentioning the principal diseases to which a horse is liable, we must enter a protest against the system of

drenching and drugging pursued by some owners towards their horses, and still more practiced by grooms upon the animals entrusted to their care. It is well to have a general knowledge of the diseases of horses, and to be able to distinguish between a trifling ailment and a sickness of a more serious nature, likewise to know what measures to adopt in cases of emergency, in the absence of the veterinary surgeon who ought however, to be applied to at once, in every case of real illness. Nothing is more likely to be injurious, and even fatal, to a good horse, than injudicious and indiscriminate physicking.

The following are some of the diseases that occur most frequently:—

Blood Spavin.—This is an affection of the hock joint, mostly caused by over-exertion, resulting in inflammation of the secretion intended for lubricating the hock joint; it is considered incurable. This does not always produce lameness, for there is an instance on record of a very handsome brown mare which has had a spavin of this kind for seven years, yet no sign of positive lameness has ever manifested itself; but in nineteen cases out of twenty blood spavin terminates in extreme stiffness of the joints, if not in decided lameness.

Bone Spavin.—This disease affects the inside of the hock joint, and no cure is known for it. It is caused by unequal pressure upon the small bones of that particular part of the hock, and is often the result of violent contortions, or twisting of the horse in his first lessons of training, or shoeing, by which the legs are thrown out of their natural formation and growth. thus displacing some of the small bones, becom-

ing a bony deposit ; or enlargements take place, gradually growing larger, and resolving itself into a confirmed spavin. Blistering, in its early stages, in some degree, counteracts the effect ; but when the horse is valuable, or happens to be a favorite, the cautery is generally resorted to, which braces up the part ; but considerable stiffness, and generally decided lameness, more or less for life, is the invariable result.

Broken-windedness.—The broken-winded condition of horses is mostly brought about by carelessness on the part of their owners, or persons who feed and use them. Inflammation of the lungs is almost always a certain fore-runner of broken-windedness. Hay given in unlimited quantities, or corn, until the horse has over-charged his stomach, and then severe exertion forced upon him, will occasion ruptures in the cells of the lungs, and thus cause the horse to breathe irregularly.

Corns are produced by bad shoeing ; they arise from unnatural pressure, Pare them out and remove the cause, and the effect will cease.

Curb is an enlargement of a circular form immediately beneath and on the back part of the hock joint ; it is caused by over exertion when young, and often after full growth ; considerable stiffness is the result, for which there is no better known remedy than blistering or firing, and long intervals of rest.

Glanders.—This is a most dangerous and infectious disease of the nostrils, and the law justifies any man destroying an animal which he can prove is afflicted with it, anywhere and under any circumstances. Many recent instances of human beings being afflicted with it have occurred, death

being the result. The symptoms are something like those of hydrophobia.

If a glandered horse enters a stable, all the horses in that stable will take the complaint, and there is no cure for it. Unprincipled dealers resort to a process called "plugging," which is carried into effect by pushing tow high up into the nostrils, first applying cayenne or snuff, which makes the horse snort out all the matter that may be at that time in his nostrils ; a strong solution of alum water is then injected, which, acting as an estringent, for a time stops the discharge. The animal afflicted with this disease always has an uneasy appearance about the head, which he constantly keeps moving ; the insides of the nostrils are red and inflamed, and if you go near him you can at once detect it by the foul smell of his breath : the best way is to destroy him at once by shooting or blowing. Blowing is a method of destroying a horse much to be preferred to the ordinary practices of shooting or poleaxing. The horse dies far more easily and much quicker. It is performed in the following manner :—Open the vein in the horse's neck, insert a small tube, made for the purpose, into the incision, and quickly apply your mouth to the other end, and blow with all your might. The blood is sent back to the heart, and the veins are filled with air ; the horse staggers, falls, and, with a gasp or two for his fast-expiring breath, dies without pain or struggling.

Inflammation.—The most common and fatal disease is inflammation of the lungs. It is generally the result of allowing the horse to stand still while in a heated state. Inflammation of the bowels and intestines often arises from overloading the stomach after the horse has been a long

time without food, which cannot be digested, and consequently it obstructs the passage to the bowels, and the horse appears languid and sleepy, refuses his food, and if a passage be not quickly made through him, inflammation of the bowels will take place ; he rakes the ground with his fore feet, and is often convulsed, which will finally end in stomach-staggers. The colic is caused by allowing the horse to drink while heated, or allowing him to go too long without feeding ; standing in the rain and cold ; this will sometimes end in inflammation of the bowels. In such case apply the brush and wisp vigorously, which will cause him to sweat, and trot him about briskly, and the evil will often disappear by these means alone ; but the best thing is to apply to a veterinary surgeon at once.

Inflammation of the feet is considered the most painful and the most malignant disease with which the feet are afflicted ; its presence is ascertained by placing your hand on the hoof when great and unnatural heat is felt ; and if you tap the hoof slightly with your toe, the most intense pain is instantly seen to manifest itself. In the absence of a veterinary surgeon, you had better at once take off the shoe ; bleed in the toe, poultice and give a dose of physic and bran mashes. But the best plan is to send for a surgeon.

Splints.—The splint is an enlargement of a spiral form in the inside of the fore leg. It is sometimes caused by kicks from ignorant or brutal grooms, but it is often the result of hard work before the animal has arrived at maturity, and before the splint-bone is properly set. Mild blistering and rest will often effect a cure. If taken in time it rarely

causes lameness, except where the upper end connects itself with the knee joint, thereby interfering with its free action.

Windgalls are visible in most aged horses that have done a moderate quantity of work. They consist of soft and puffy enlargements upon and round the fetlock-joint.

Stumbling.—When this is not the consequence of malformation of the horse, it is to be prevented; and even if the make of the animal be such that he cannot avoid falling when he is leg-wearied, it is to be relieved, and leg-weariness eased, by attention to the preceding observations on food, mashes and water. The strength and courage of a horse is sustained by a sufficient quantity of nutritive food. Mashes serve to keep off that low fever, which, if not prevented, ultimately ruins him. But plenty of water, has more than all to do with the prevention of fever, by assisting the proper digestion of the food. Now, horses subjected to good treatment in the way prescribed, will be infinitely less liable to that slow fever which is the sure precursor of inflammation of the feet.

When a horse is first observed to stumble, stop and bandage the feet as already described. Give him a short allowance of water at night, and as much as he will drink just before starting in the morning. The adoption of this plan will answer the purpose of a dose of physic and will probably prevent inconvenient stoppages on the road. Should this, however, not answer the end desired, the feet should, at the same time, be bathed in warm water, and wet woolen bandages be immediately applied.

Harness and Saddle Galls.—Great care should be taken that the harness is properly adjusted to a horse and that all

stuffing should be kept soft and smooth, which may readily be done by causing it every now and then to be dried by the fire or in the sun, and then beat with a stick. There should be no chafing of the back bone. Where a collar is worn, it is better to have it rather small than large. A large collar is sure to wring the horses neck ; a small one never will. Where swelling has occurred in consequence of the collar either being dirty or too large—bathe the shoulders with alum and cold water.

The crupper should also be loose ; a tight one will often provoke a horse to kick ; even where the tail is not rubbed into a state of rawness.

It is proper to observe that the front of the blinders be kept wide enough from the eyes of the horse. This precaution will prevent the blinders pressing upon and inflaming the eyes ; and at the same time prevent him seeing behind them, as he mostly can when they are tight in front.

It is better to have the weight thrown off the back, than upon it ; that is to say, let the shafts at the back hand be rather too high than too low.

In order to cure a sore back, where the skin is off, bathe the place every morning with warm water, and also at night when putting up ; taking care, after each bathing, to apply a little ointment made of hog's lard and burnt alum, spread on a piece of linen (the full size of the sore) ; and then be careful to prevent chafing ; a few days will effect a cure.

Again : if, from friction, the neck should become raw before any injury is observed, no time should be lost in bathing it with warm water, and rubbing in the alum ointment, which may be obtained at any chemist's. But, mark, the

collar must be prevented touching the sore. When warm water is mentioned, it is not meant to be more than temperately warm, and not so hot as to scald ; yet still as warm as the animal can conveniently bear it ; for it should be remembered that water only moderately hot to the hand, may be sufficiently so to scald the horse.

Broken Knees.—Persons who have travelled much have probably observed that horses accustomed to road-work, particularly if they should come under the description of those which are let out to hire, are frequently broken kneed. If you enquire of these traffickers in horses the reason of so many animals being blemished in this manner, they will generally give the most unsatisfactory answers. They tell you it is by throwing the horse down, but which is a phrase appropriate only in certain cases. By over-working a horse, and so making him weary on his legs, he will probably fall and so far the phrase of throwing him down may not be incorrect. It is scarcely possible to throw down a good horse under proper treatment, but, under contrary usage, it is equally difficult to keep him firm upon his legs.

Paradoxical though it may seem, the worst, as well as the best horsemen meet with the fewest accidents, by falls. A good rider, or driver, allows his horse to go as he pleases ; the animal, therefore, does not fatigue himself uselessly ; as his master exercises the precaution of taking advantage of circumstances to assist him as much as possible. A bad rider is too timid to play tricks with a horse, and the animal is consequently, from a very different cause, left much to his own way, and thus there is the less liability to accident in this case. But the self-conceited rider, or driver, mars

nature, checks the animal in his step, ultimately renders him what is termed *tied in the shoulders*, and is always keeping him on the fret. The result is, that the horse becomes leg-weary much sooner than he would otherwise be, and hence he is more apt to stumble and fall. But if you ask a gentleman of the description alluded to, why he thus keeps his horse in a continual fidget, the answer would probably be, it is to *keep him up*.

But as accidents, from a variety of causes, will be ever occurring to horses, it will not be irrelevant to say something as to the mode of cure, as well as the means of prevention. In the case of injured knees, or falls, as soon after the accident has occurred as possible, the knees should be well bathed for some time, with hot water, even though they should not be grazed ; as this timely precaution will tend to prevent swelling from a bruise. If the knees should be cut, they should be well washed and cleansed from even the smallest particle of gravel they may have received. Let them afterwards be well bathed for a moderate period ; but no grease of any kind should be applied to the wounded part. If the cut be not deep, a little burnt alum, finely powdered, and laid over the place, so as to dry it and keep off the dust, will suffice ; but if the wound should be of a more serious nature, the better plan is always to call in the assistance of a veterinary surgeon. Ostlers, or stablemen, in cases of this kind shonld never be trusted ; their nostrums, or supposed remedies, are invariably worse than the disease. The application of grease is always injurious, yet ostlers will persist if you let them, in using it upon every slight occassion : it always irritates the skin. When it is desirable to conceal

a hurt, it may be done by mixing up a little soot with burnt alum.

CHAPTER XIV.

Horse Taming.

HE most concise book that professes to treat of horses would be considered incomplete without some remarks on this subject, which has of late excited so much attention. It is not supposed that the general reader will be anxious to try his hand at subjugating unruly kickers and vicious horses, generally; but it is advantageous to all to know the rules by which rebellious equine nature may be brought to submission; and to appreciate how in the education of horses, as in that of bipeds, the law of kindness is alike invaluable. The whole subject teaches the great and important lesson, that at least half of what we are accustomed to designate as *vice* is mere nervousness and timidity on the part of the young horse, and will vanish before the efforts of the tamer who has wit and tact enough to persuade his four-footed pupil that he intends him no harm.

The publication of the work describing Rarey's system of horse-taming, and of Mr. Telfer's manual on the same sub-

ject, gave the public an insight into the means by which these wonderful results are brought about. The chief point on which the whole process turns are firmness and kindness judiciously combined. The directions given for haltering a very wild colt, may serve as a sample of the system. Mr. Telfer's mode of procedure is as follows:—

“If your colt be running loose in company with other young horse in a field, drive the whole herd into a small enclosure and carefully separate the one you require from the others, by letting them pass, one by one, out of the gateway, until the animal yon are about to halter is the only one remaining, he will become very unsettled by being left alone, but, having provided yourself with a very quiet old horse, you can introduce him to keep him company. Leave them together a short time, and, when you again visit them, bring with you a piece of carrot, or a little corn in your pocket; take not the slightest notice of your colt for a time, but commence to feed, from your hand, the old horse, and the colt will commence walking around you, or sometimes he will stand still at a short distance and observe your movements, approaching nearer and nearer, until he is close to you and the horse. You may now offer him the carrot, which, in all probability, he will touch with his nose first and then bite after which he will immediately poke his nose out and beg, as it were, for more; all this time have the head part of your leather halter in the same hand from which you offer him the carrot or corn—carrot is best—all horses are immoderately fond of carrots. This will familiarise him with the touch of the halter, and he will care nothing about it. You must not be impatient to put on the halter as he will

not leave you now; keep caressing the old horse, for the colt will stand by and watch every movement, and this will teach him that you do not intend to hurt him. Keep putting out your hand and let him touch it with his nose frequently, and he will, in one hour from the commencement, allow you to place the halter on his head; taking the old horse in your left hand, and the colt with your right, with a slack hold of the halter, and a bit of carrot in it, occasionally stopping to give him a taste, you may lead him anywhere. Now, let some other person take hold of the horse, and stand at a little distance, while you lead the colt slowly round in a small circle in the centre of the enclosure, which accustoms him to the track he is hereafter to pace under more difficult circumstances, stop him a few times, at short intervals, and, taking hold of the hair on his fetlock, give a slight tug, and say, '*Hold up*,' laying a strong emphasis on the word '*up*.' Have patience with him, and he will soon understand and obey you, by picking up his foot, which he, however, sometimes will quickly replace upon the ground; but keep repeating this action and words, and he will, after a few attempts, allow you to retain his foot in your left hand. It must be remembered that I am now speaking of very wild colts. The same system should be adopted in all cases when young horses are first haltered; but the time and patience required depend solely upon the character of your subject."

The taming process, which we have not space to describe particularly, is effected by means of some straps fastened to the horse's forelegs, and a great deal of judicious management; this much should, however, be understood by every-

one who empolys a horse, or has the control of one of these useful animals in any capacity whatever—that what is called *vice* in a horse arises, in nine cases out of ten, from fear; that many a noble horse has been confirmed in his fault, and utterly spoiled by the ignorance and brutality of would-be trainers and grooms; and that the true maxim upon which to proceed in managing this most valuable of the dumb servants of man, is the precept we have from the very highest of all authority, that “*a merciful man is merciful to his beast.*”

It may not be amiss in this connection to say something on the subject of shying horses.

Shying is sometimes the effect of fear and sometimes of vice, and there are many horses which begin by the former and end with the latter in consequence of mismanagement. The young colt is always more or less shy, especially if he is brought at once from the retired fields in which he was reared to the streets of a busy town. There are, however, numberless varieties of shyers, some being alarmed by one kind of object which to another is not at all formidable. When a horse finds that he gains his object by turning round, he will often repeat the turning without cause, pretending to be alarmed and looking out for excuses for it. This is not at all uncommon, and with timid riders leads to a discontinuance of the ride by which the horse gains his end for the time, and repeats the trick on the first occasion. In genuine shying from fear, the eyes are generally defective, but sometimes this is not the case, and then the shying comes from a general irritability of the nervous system. Then there are many which never shy at meeting wagons or

other similar objects but almost drop with fear on a small bird flying near their heads. These are also worse because they give no notice, whereas the ordinary shyer almost always shows by his ears that he is prepared to turn.

For Shyers the only remedy is to take as little notice as possible, to make light of the occurrence, speak encouragingly yet rather severely *and to get them by the object somehow or other*. If needful, the *aid* of the whip may be called in but not as a *punishment*. If the horse can be urged by the object without the whip, so much the better, but if not he must be compelled to do so by its use. Whenever fear is the cause of shying, punishment only adds to that fear; but where vice has supplanted fear, severity should be used to correct it. As a rule the whip need never be used unless the horse turns absolutely round, and not then unless there is reason to suspect that he is pretending fear. If only he will go by the object, even with a wide berth, he may be suffered to go on his way unpunished and nothing is so bad as the absurd severity which some men exercise after the horse has conquered his reluctance and passed the object. At this time he should be praised and patted with all the encouragement which can be given, but on no account should he be taught to make those rushes which we so often see on the road, from the improper use of the whip.

Running Away is only an extreme form of pulling in the gallop, but sometimes it is of the most vicious description. It is a good plan with determined brutes to make them gallop to a stand still by giving them an up-hill burster. This will generally answer, but occasionally there is a horse which is made worse by this treatment. Still, it generally

succeeds and most horses are rendered quiet for some time by such an effort ; nevertheless they generally try again as soon as they are fresh, and they are certainly not to be trusted with any but experienced drivers. It is of no use to pull dead at these animals, but it is better to let them go when there is plenty of room, and then to try what a sharp and severe pull will do ; not keeping it up too long if ineffectual, but loosing the mouth again for a time, and then try again. Sometimes, however, there is no room for this, and then the only plan is to try and bring the head round, either with a view of galloping in a circle, or to run the head against a fence or wall. Sometimes anything is preferable to a straight course, as for instance when the running away occurs in a crowded thoroughfare. Here the horse must be pulled into anything which will stop him and all risks must be run of damaging him. He should be rushed full tilt against the obstacle and not too obliquely, which would not at all answer the purpose. When backing is adopted by the horse with vicious intentions and contrary to the will of his master, it is called "jibbing" and is a most unmanageable trick for which the best remedy is patience. Punishment never answers as the horse always jibs the more. But by quietly waiting till he is tired, the animal will generally give up the fight and continue his progress in the desired direction.

CHAPTER XV.

Sending for the Veterinary Surgeon.

NON the hurry and excitement consequent upon sudden accident or illness among animals, messengers are frequently despatched with imperfect reports, and therefrom much error and inconvenience results. These facts may be sufficient excuse for appending a few plain rules to be observed in order to avoid the occurrence of untoward events, and rather expediate matters towards a favorable if not successful issue.

First.—As far as possible always send a written message. Never trust verbal messages to boys or illiterate persons; and let the name and address be legibly inscribed.

Second.—Send *early*, that the practitioner may see the case before it is aggravated by serious and irrecoverable complications.

Thirdly.—Afford as much information as possible as to what has been observed of the *symptoms* manifested by the animal. The practitioner may be greatly assisted in preparation of remedies to take with him. Never send such a

message as "You are to come directly, we have a horse (or cow) sick." This is a very useless and perplexing statement.

Fourthly.—Avoid absolute doctoring the animal for which you desire professional opinion. Attend implicitly to the instructions received, and success will be more certain.

Fifthly.—Never withhold information upon matters which are calculated to throw light upon the causes, nature, symptoms, etc., of the ailment. Absence of such paralyses the hands of skill, and prevents the adoption of proper measures.

These may admit of some variation under certain circumstances, but in the majority of cases, if carried out properly, they will effect more good than is to be expected at the present day in many places, from the utter disregard of system which prevails, particularly in agricultural districts.

CHAPTER XVI.

Poultices and Fomentations.

HERE is frequently great need of these agents as auxiliaries to the treatment of disease which arises among horses. In contradistinction to the great amount of

good which they may be caused to effect, much harm may ensue by ignorance or misunderstanding.

A poultice is employed for two purposes—to apply heat and moisture conjointly to a part, or cold and moisture. We have therefore warm and cold poultices. Fomentations, on the other hand are always hot. They consist usually of water alone, or infusions of some plant whose active principle has some medicinal effect.

The object in either case is to perpetuate in a part by external means, either a degree of heat or cold which cannot be effected otherwise, in order to promote some desirable curative action. To render these means effective, their use must be long continued, and the desired temperature maintained as near as possible. A poultice loosely applied, or a fomentation imperfectly maintained, produces absolute harm by the evaporation and cooling which ensues, and its effects upon the internal structures. When parts have been fomented or poulticed, they should either be dried or protected by covering from the atmosphere.

In the treatment of wounds or abscesses, neglect of these precautions produces serious obstructions to the successful recovery of the case, and the medical attendant too frequently incurs undeserved censure.

Fomentations are very serviceable to the horse in all recent external inflammations, and it is astonishing how much may be done by a careful groom with warm water alone and a good sized sponge. Sometimes by means of an elastic tube and a stop cock, warm water may be conducted in a continuous stream over an inflamed part, as in severe wounds etc., in which this plan is found wonderfully successful in

allaying the irritation, which is so likely to occur in the nervous system of the horse. A vessel of warm water is placed above the level of the horse's back and a small India rubber tube leads from it to a sponge fixed above the part from which the water runs as fast as it is overfilled. It is a plan easily carried out by any person of ordinary ingenuity.

Lotions are applied by means of coarse cloth bandages, if used to the legs ; or by a piece of cloth tied over the part, if to any other surface.

CHAPTER XVII.

Mode of Administering Remedies.

THE most common form in which medicine is given to the horse is by means of the ball, an oblong mass of rather soft consistence, yet tough enough to retain its shape and wrapped up in thin paper for that purpose. The weight of the ball is from half an ounce to an ounce but they may be given of a larger size if they are made longer but not wider. Every groom should know how to give a ball. The ordinary, and best way, the horse's tongue is drawn out of his mouth on the off or right side, and held

there firmly with the left hand, grasping it as near the root as possible, but to a certain extent yielding to the movement of the horses head. The ball is then placed between the fingers and thumb of the right hand, extended in a wedge-like form, so as to pass as far down the swallow as possible. The hand, in this form, with the arm bared to the shoulder is carried over the root of the tongue till it feels the impediment caused by the contraction of the swallow, when the fingers leave the ball there, and the hand is withdrawn quickly but smoothly, while at the same moment the tongue is released and the head is held up till the ball is seen to pass down the gullet in the left side of the neck, after which the head may be released. The horse may be turned round in his stall which prevents his backing away from the groom. Balls should be recently made as they soon spoil not only losing their strength but becoming so hard as to be almost insoluble in the stomach, and frequently passing through the bowels nearly as they went into the mouth. They are also liable to stick in the gullet. If ammonia or any other strong stimulant is given in this way the horse's stomach should not be quite empty, but should have a little gruel or water just before, for if this be put off till afterwards the nauseous taste of the ball almost always prevents his drinking. When arsenic forms the principal ingredient of the ball, it should be given soon after a feed of corn or a quart or two of gruel.

The administration of a Drench is a much more troublesome affair than the giving of a ball. In almost all cases more or less of the dose is wasted. Sometimes, however, the liquid medicine is preferable, as in colic or gripes, when

the urgent nature of the symptoms demands a rapidly acting remedy, which a ball from its requiring time to dissolve is not. Besides this a ball cannot contain any of the spirituous cordials. The best instrument for giving a drench is the horn of the ox, cut obliquely so as to form a spout. In giving a drench the tongue is held in the same way, but the head must be more elevated. The drench is then poured carefully into the throat, after which the tongue is released, but the head still kept up until all is swallowed.

Physicing, or the giving of opening medicines is necessary in many diseases. In all cases the horse should be prepared by bran mashes given for two or three nights so as to render the bowels loose and thus allow the dose to act without undue forcing of the compacted *faeces* backwards. If physic is given without this softening process, the stomach and bowels pour out a large secretion of fluid which is forced back and met by a solid obstacle which it takes a long time to overcome, and during that time the irritating purge is acting upon the lining membrane, often producing excessive inflammation. Purging physic is generally given in the middle of the day, after which the horse should remain in the stable and have chilled water as often as he will drink it with bran mashes. By the next morning he will be ready to be walked out for an hour, which will set the bowels to act if they have not already begun. The tail may be tied up to keep it clean. The horse should be warmly clothed, and if the physic does not act with an hour's walk, he may be gently trotted for a short distance, and then taken home. If still obstinate he may be exercised again in the afternoon. As soon as the physic operates pretty freely, the

horse is to be taken into his stable, *and not stirred out again under any pretence whatever*, for forty-eight hours after it has "set" or ceased acting.

When the purging has ceased, the mashes may be continued for twenty-four hours, with a little corn added to them and a moderate quantity of hay. The water during the whole time should be in small quantities and chilled. The clothing should be rather warmer than usual, taking great care to avoid all draughts. Every horse requires at least three days rest for a dose of physic in order to avoid risk of mischief.

The mode of giving a Clyster is rendered simple enough, because a pump and tube are expressly made for the purpose. The attendant has only to pass the greased end of the tube carefully into the rectum for about eight or nine inches and then pump the liquid up until a sufficient quantity is given. From a gallon to six quarts is the average quantity, but in colic, a much larger amount is required.

CHAPTER XVIII.

Recipes.

E append a few recipes which will be found valuable to persons living at a distance from a regular veterinary practitioner, but when such a one is to be pro-

cured, we do not advocate the medical treatment of horses by inexperienced persons.

ALTERATIVES.

Alteratives are intended to produce a fresh and healthy action instead of the previous disordered function. The precise mode of action is not well understood and it is only by the results that the utility of these medicines is recognized.

IN DISORDERED STATES OF THE SKIN.

Emetic Tarter,	5 ounces
Powdered Ginger	3 "
Opium,	1 ounce

Syrup enough to form 16 balls, one to be given every night.

SIMPLY COOLING.

Barbadoes Aloes,	1 ounce
Ginger,	$\frac{1}{2}$ ounce
Castile Soap,	$1\frac{1}{2}$ ounces

Syrup enough to form 6 balls; one to be given every morning.

ALTERATIVE BALL FOR GENERAL USE.

Black Sulphuret of Antimony,	2 to 4 drachms
Sulphur,	2 "
Nitre,	2 "

Linseed meal and water enough to form a ball.

IN DEBILITY OF STOMACH.

Calomel,	1 scruple
Aloes,	1 drachm
Cascarilla,	1 "
Gentian,	1 "
Ginger,	1 "
Castile Soap	3 drachms

} In powder.

Syrup enough to make a ball which may be given twice a week, or every other night.

ANODYNES.

These medicines are given rather to soothe the general nervous system or to stop diarrhea, or sometimes to relieve spasm, as in colic or tetanus. Opium is the chief anodyne used and may be employed in large doses.

IN COLIC.

Powdered Opium,	$\frac{1}{2}$ to 2 drachms
Castile Soap,	2 "
Camphor,	2 "
Ginger,	1 $\frac{1}{2}$ "

Make into a ball with liquorice powder and treacle, and give every hour while the pain lasts. Keep it from the air.

ANODYNE DRENCH IN ORDINARY DIARRHEA.

Gum Arabic,	2 ounces
Boiling Water	1 pint
Dissolve and then add	
Oil of Peppermint,	25 drops
Tincture of Opium,	$\frac{1}{2}$ ounce

Mix and give if necessary night and morning.

IN CHRONIC DIARRHEA.

Powdered Chalk and Gum-Arabic, each,	1 ounce
Tincture Opium,	$\frac{1}{2}$ "
Peppermint Water,	10 ounces

Mix and give night and morning.

APERIENTS

Aperients, or purges, are those medicines which quicken or increase the evacuations from the bowels, varying, however a good deal in their mode of operation. Some act merely by exciting the muscular coat of the bowels to contract; others cause an immense watery discharge, which, as it were, washes out the bowels; while a third set combine the action of the two. Purgations are classed according to the *degree* of their effect, into laxatives acting mildly, and drastic purges acting very severely.

ORDINARY PHYSIC BALL.

Barbadoes Aloes,	3 to 8 drachms
Hard Soap,	4 "
Ginger,	1 drachm

Dissolve in as small a quantity of boiling water as will suffice; then slowly evaporate to the proper consistence, by which means griping is avoided.

PURGING BALLS WITH CALOMEL.

Barbadoes Aloes,	3 to 6 drachms
Calomel,	$\frac{1}{2}$ to 1 drachm
Rhubard,	1 to 2 drachms
Ginger,	$\frac{1}{2}$ to 1 drachm
Castile Soap,	2 drachms

Mix as in the above.

A MILD OPENING DRENCH.

Castor Oil,	4	ounces
Epsom Salts,	3 to 5	"
Gruel,	2	pints

Mix.

A MILD LAXATIVE.

Castor Oil,	4	ounces
Linseed Oil,	4	"
Warm water or Gruel,	1	pint

Mix.

ANOTHER PHYSIC BALL.

Barbadoes Aloes,	3 to 8	drachms
Carbonate of Soda,	½	drachm
Aromatic Powder,	1	"
Oil of Caraway	12	drops

Dissolve as above and then add the oil.

PURGATIVE CLYSTER.

Common Salt,	4 to 8	ounces
Warm Water,	8 to 16	pints

ASTRINGENTS.

Astringents are supposed to produce contraction in all living animal tissues with which they come in contact, whether in the interior or exterior of the body. They

are divided into astringents administered by the mouth and those applied locally to external ulcerated or wounded surfaces.

FOR DIABETES OR TOO PROFUSE STALING.

Opium,	½ drachm
Powdered Ginger,	2 drachms
Oakbark, powdered,	1 ounce
Camomile Tea,	1 pint
Alum, as much as the tea will dissolve	

Mix for a drench.

EXTERNAL ASTRINGENT POWDER FOR ULCERATED SURFACES.

Powdered Alum,	4 ounces
Armenian Bole,	1 ounce

ANOTHER.

White Vitriol,	4 ounces
Oxide of Zinc,	1 ounce

Mix.

ASTRINGENT LOTION.

Sulphate of Copper,	1 to 2 drachms
Water,	½ pint

Mix.

ASTRINGENT OINTMENT FOR SORE HEELS.

Superacetate of Lead,	1 drachm
Lard,	1 ounce

Mix.

BLISTERS.

Blisters are applications which inflame the skin, and cause watery bladders to form upon it; they consist of two kinds, one, for the sake of counter-irritation, by which the original disease is lessened, in consequence of the establishment of this irritation at a short distance from it. The other is commonly called "sireating;" by which a discharge is obtained from the vessels of the part itself, which are in that way relieved and unloaded; there is also a subsequent process of absorption in consequence of the peculiar stimulus applied.

MILD BLISTER OINTMENT (COUNTER-IRRITANT).

Hogs Lard	3 ounces
Turpentine,	1 ounce
Powdered Cantharides,	6 drachms.

Mix and spread.

STRONGER BLISTER OINTMENT.

Spirits of Turpentine,	1 ounce
Sulphuric Acid,	2 drachms

Mix carefully in an open place and add

Hogs Lard,	4 ounces
Powdered Cantharides,	1 ounce

Mix and spread.

SWEATING BLISTER.

Mercurial Ointment,	2 ounces
Oil of Origanum,	2 drachms
Corrosive Subl'mate,	2 drachms
Cantharadies, powdered.	3 drachms

Mix and rub in with the hand.

STRONG SWEATING BLISTER FOR SPLINTS, RING-BONES,
SPAVINS ETC.

Biniodide of Mercury,	1 to 1½ drachms
Lard,	1 ounce

To be well rubbed in the legs after cutting the hair short, and followed by the daily use of arnica, in the shape of a wash, as follows, to be painted on with a brush :—

Tincture of Arnica	1 ounce
Water,	12 to 13 ounces

Mix.

CAUSTICS.

Caustics are substances which burn away the living tissues of the body by the decomposition of their elements. They are of two kinds, viz., first, the actual cautery or firing iron, and secondly the potential cautery by means of mineral caustics, such as potash, lunar caustic, etc.

Firing is used extensively upon horses for inflammation of the legs, and should be performed only by an experienced hand. Some of the strong solid caustics are as follows :—

Luner-Caustic, or nitrate of silver, very valuable to the veterinary surgeon and constantly used to apply to profuse granulations.

Sulphate of Copper, almost equally useful but not so strong as lunar-caustic ; it may be well rubbed in to all high granulations, as in broken knees and similar growths.

Corrosive Sublimate in powder, which acts most energetically upon warty growths but should be used with great

care. It may safely be applied to small surfaces but never to large ones without a regular practitioner.

Among the *mild solid caustics* are the following. They are preferable to the stronger ones if they can be made to answer the purpose.

1st. Verdigris, either in powder or mixed with lard as an ointment in the proportion of 1 to 3.

2nd. Red precipitate, mixed as above.

3rd. Burnt alum, used dry.

4th. Powdered white sugar.

CORDIALS.

When a warm temporary stimulant is needed, to augment the strength and spirits, and relieve the animal from the effects of over-exertion, give a quart of good ale warmed, with plenty of powdered ginger.

EXPECTORANTS.

Expectorants excite or promote discharge of mucous from the lining membrane of the bronchial tubes, thereby relieving inflammation and allaying cough.

FOR ORDINARY COUGH.

Gum Ammoniacum,	$\frac{1}{2}$ ounce
Powdered Squills,	1 drachm
Castile Soap,	2 drachm
Honey enough to form a ball.	

FOR OLD STANDING COUGH (STOMACH.)

Assafætida,	3 drachms
Galbanum,	1 drachm
Carbonate of Ammonia,	$\frac{1}{2}$ "
Ginger,	$\frac{1}{2}$ "
Honey enough to form a ball.	

FOR FEVER.

Nitre,	4 ounces
Camphor,	$\frac{1}{2}$ drachm
Calomel,	1 scruple
Opium,	1 "

Linseed meal and water enough to form a ball.

COOLING LOTION FOR INFLAMED LEGS OR FOR GALLED
SHOULDERS OR BACK.

Sal Ammoniac,	1 ounce
Vinegar,	4 ounces
Spirits of Wine,	2 ounces
Tincture of Arnica,	2 drachms
Water,	$\frac{1}{2}$ pint

Mix and apply with a bandage.

The above hints are, we repeat, only for the benefit of such persons as are unable by reason of distance to call upon a veterinary surgeon. The administration of medicine by inexperienced hands is always attended with danger and consequent risk, and such persons should proceed with the greatest caution and only in cases of necessity. The great principle of *prevention* in disease, will be found to pay a hundred per cent for the practicing.

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